

INDUSTRIAL PLANNING : WHY AND HOW :

BY
NABAGOPAL DAS, PH.D. (ECON.) LOND., I. C. S.

SECOND REVISED EDITION

WITH A FOREWORD
BY
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Formerly Commerce Member,
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PREFACE TO THE SECOND EDITION

Thanks to the keen interest taken by the public in the subject of industrial planning, the First Edition became exhausted within less than three years and the book remained out of print for over ten months. I continued, however, to receive anxious enquiries from readers all over India as to when a Second Edition would be published. Then came the famous Bombay Plan and a series of other Plans elaborated by different political groups as well as by the Government of India. I felt that the time had come when I should resurrect my book and place it before the public again for what it is worth.

The present Edition is the result of my efforts at resurrection. In this Edition, not only have I brought all facts and figures up-to-date, but I have added as many as three new chapters. In the remaining chapters, I have drastically altered, and sometimes completely rewritten, many paragraphs, because I saw that five years of war had wrought considerable changes to the face of India. In a sense, therefore, it is almost a new book, although I have not disturbed the essential form in which the First Edition had been published. I only hope that the present Edition will prove as useful and informative to the general reader as did the First.

C/o Grindlay & Co., Ltd.,
Calcutta, 1944.

N. DAS.

PREFACE TO THE FIRST EDITION

This is an introductory book for the general reader and the author does not presume to offer any “plan” for industrial re-organisation in India. Instead, his aim has been to tell the average man in the street what industrial planning means and what specific suggestions he may reasonably expect to find in the “plan” or “plans” which will be suggested by the National Planning Committee or the various Provincial Industrial Survey Committees now at work. At the same time, the main problems facing industry in India have been presented in a scientific and objective manner, and indication has been given as to the lines along which a solution may be attempted. If this introduction helps the general reader to take a more intelligent interest in the economic problems of the day, the author will consider his labour amply rewarded.

In conclusion, the author desires to express his deep gratitude to MR. NALINI RANJAN SARKER who, in spite of his other pre-occupations, kindly consented to write a Foreword to the book and thereby made available to its readers some of his valuable knowledge about the problems of industry.

C/o Grindlay & Co., Ltd.,
Calcutta, 1940.

N. DAS.

FOREWORD TO THE FIRST EDITION

In recent years the subject of economic planning of which industrial planning is but a part has provided a study of absorbing interest to Indian economists and statesmen alike. Several factors of economic and political significance that came into prominence during the last decade or so have invested it with a special importance in the present stage of India's economic and political evolution. The initial interest created in the subject is, of course, to be traced in India, as elsewhere in the world, to the grandiose scheme of national economic reconstruction launched in Soviet Russia. Even apart from the ideology behind it, the Soviet scheme and the actual results of its working had an appeal for the capitalistic countries by way of not only emphasising the need for a planned control of the economic activities of the nation but also demonstrating how it was practicable to accelerate the pace of the economic development of a backward country by planned action of Government. The capitalistic countries of Europe which emerged from the last Great War with an economic system completely thrown out of gear were not slow to respond to the inspiration of the Russian experiment although they have never been sparing in their condemnation of the communistic ideal behind the Soviet scheme. In almost all these countries, bodies of experts have been set up in some form or other suiting their constitutional traditions to advise their respective national parliaments in regard to future economic policies. And, as a matter of fact, the economic history of most of these countries for the last decade reveals a steady expansion of State control over the economic activities of the nation. For a country like India with

her vast potentialities, of which but a very small part has presumably been realised during a century and a half of *laissez faire* economy following the industrial revolution, it was but natural to react to this new wave of enthusiasm that has swept over all progressive countries of the world.

The second factor which very largely reinforced the arguments for economic planning with a view to reconstruct national economy was the great economic depression which set in in 1929. It had disastrous reactions on predominantly agricultural countries like India where prices suffered a much heavier fall than in countries with a balanced economic structure, supported by diversified occupations of the people in trade, commerce, industry and the like. The depression very clearly revealed the perils of a lop-sided growth due to a haphazard economic policy pursued in India and gave an impetus to the urge for guiding the economic development of the country along more rational channels in accordance with an intelligent plan to be devised in the light of the special needs and problems of India. This urge was in fact reinforced by the experience of the country in the matter of industrial development. While in most of the major industries which had developed in India we have almost reached the point of saturation, there are a number of other industries which remain underdeveloped or not at all developed, although we have excellent natural advantages for their profitable exploitation. Such an experience is indeed the legacy of the *laissez faire* policy hitherto followed by Government.

The third factor which has aroused a special interest in economic planning is to be ascribed to various political ideologies which have for some time past been exercising the minds of different political sections in India in regard

to economic policies to be pursued by the future Government at the Centre either under a federal scheme as envisaged in the Government of India Act, 1935, or under any other scheme significant of a higher political status that may take its place. Although this amounts to thinking ahead, the need for formulating the principles of the future economic plan in advance has been felt as much on some practical grounds as under the urge of defining the attitude of different political organisations towards the economic problems of the country at this psychological moment. A foretaste of the practical necessity has already been provided by the experience of the autonomous Provincial Governments which found themselves compelled to take up the problems in right earnest in their respective spheres. Although they have found their scope for initiative and action restricted owing to the limited powers conferred on them by the Act of 1935, which vests control over currency, tariff etc. in the Central Government, and also for want of a co-ordinating Central plan, their administrative experience during the last few years has revealed that much practical results may be achieved by planned efforts in social as well as economic spheres.

The question of economic planning has thus assumed a practical significance which explains why the Congress, the largest political organisation in India, was called upon to take up the question as a serious practical issue even before the establishment of a fully responsible government at the Centre. Evidently in such circumstances the nature and complexion of the plan would depend much on the assumption we may make about the Planning Committee appointed by it to draw up a scheme of economic reconstruction in terms of complete economic freedom, taking due care, however, to emphasise

VIII

that the plan drawn up in this light would provide us with a co-ordinated programme which would guide the various Provincial Governments even within their present limitations and assist them gradually to attain the ideal position in Indian economy. It need hardly be said that the practical importance or utility of such a comprehensive plan is considerable, although it may not be immediately possible to translate it into action in its entirety. The delay in the construction of a house, for instance, caused by any unforeseen circumstances, does not detract from the value of the architect's plan; and even in such contingencies building operations may proceed to whatever extent is possible in harmony with the existing conditions and the complete plan that is in view for the future. If, therefore, there are no basic defects in the plan itself we need not fight shy of it, only because some parts of it may not be carried into action. We need only assure ourselves that our economic plan is adequate for our needs and in consonance with the spirit and tradition of the soil, just as the architect's plan must pay due heed to the laws of gravitation and their requirements.

It is, however, a fact that there is a lot of confusion in popular minds about even certain basic implications of economic planning. To some it smacks of a revolutionary concept, just as to many it has the appeal of a magic expression with but a dim appreciation of what it stands for. As a matter of fact, however, it is a very simple concept giving cause for neither cynicism nor superstitious faith. Planning on a national scale is nothing but a wider application of the same principle of common wisdom that prompts an individual to plan his household or his future career. The difference is, indeed, a quantitative one, for in a national plan it becomes

necessary to take a much wider view of things not only for co-ordinating the interests of different sections of the community representing particular groups of individuals but also for righting the wrongs of the present and providing against their recurrence in the future.

Nowhere is this foresight more urgently called for than in planning the future development of industries, for industrial undertakings once started at a particular place or point of time become so identified with the locality and environments that they can hardly be shifted elsewhere without serious prejudice to their stability and growth. Besides, their inter-dependence makes it incumbent to follow a logical order of development. There are again the questions of adjusting the requirements of the various provinces which are growing self-conscious and their claims to industrial development. It is thus necessary to remember, lest we should be carried away by over-enthusiasm, that in planning our future industrialisation we are not given to write on a clean slate with an unfettered hand and that for our immediate programme at least we are handicapped by numerous external and internal checks. The *raison d'être* and also the excellence of industrial planning would lie, therefore, in devising suitable ways and means by which the impediments of these checks may be surmounted.

The various practical difficulties that confront the task and the various issues to be tackled by planned action have been very lucidly presented by DR. N. DAS, I.C.S., in his present book on INDUSTRIAL PLANNING to which I have the pleasant duty of writing this FOREWORD. DR. DAS has endeavoured in this book to explain certain basic problems of industrial planning to those who have not had the opportunity of applying

their minds to the subject or have imperfect and sometimes very erroneous notions about it. He has not started with any preconceived ideas in support of any particular doctrine or dogma. Instead, he has made an open, scientific approach to the subject and revealed by an intelligent, analytical study how in respect of practically all the factors of industrial production such as raw materials, capital, labour and enterprise, India now suffers from serious drawbacks which must be removed to accelerate the pace of her industrial development with a view to a progressive growth of her economic prosperity. It is not so much the unravelling of any new drawbacks or problems as their setting against a unified background with suggestions of possible solution that constitutes the special interest and utility of this book, which, to say the least, bears the impress of a keen, rational mind.

DR. DAS has refrained from offering any plan himself. That does not, to my mind, detract from the value of a treatise of this kind. The task of planning is difficult, complicated and much too stupendous for any individual to tackle. Industrial planning in any of its aspects is pre-eminently a subject in which clarification of ideas regarding the nature of the problem means a definite step forward towards its solution and as such the warring ideologies regarding economic planning, giving rise to controversies and sometimes to undue suspicion or pessimism, have also to be clarified. DR. DAS has made a laudable attempt to contribute to this work of elucidation and in this he has succeeded well.

NALINI RANJAN SARKER.

CONTENTS

CHAPTER	PAGE
I. The Rationale of Industrial Planning	1
II. The National Income—A Digression	8
III. The Bombay Plan and After	12
IV. A Study of Exports and Imports —Another Digression	18
V. The War and Indian Industries	27
VI. Problems of Industrial Planning : Raw Materials	41
VII. Problems of Industrial Planning : Capital	46
VIII. Problems of Industrial Planning : Labour	55
IX. A Further Discussion of the Problem of Wages and Industrial Efficiency	60
X. Problems of Industrial Planning : Entrepreneurs, Experts and Skilled Workers	71
XI. Industrial Promotion and Industrial Management	77
XII. Electrical Development and Industrial Planning	87
XIII. Other Problems of Industrial Planning	92

CONTENTS

CHAPTER	PAGE
XIV. Cottage Industries and Industrial Planning	96
XV. Unemployment and Industrial Planning	110
XVI. Technical and Commercial Education	115
XVII. Conclusion	124
BIBLIOGRAPHY	131

CHAPTER I

THE RATIONALE OF INDUSTRIAL PLANNING

A Recital of Certain Fundamental Facts

In India to-day a large measure of industrialisation is considered necessary for various reasons. Firstly, the national income of India is extremely low and it is a universally admitted fact that the inhabitants of this sub-continent are steeped in a poverty for which there is no parallel in any part of the Western world. Although opinions may differ on the question whether poverty in India is on the decline or not, nobody seriously disputes the proposition that, judged by Western standards, the Indian masses are extremely poor. Secondly, there is no balance in the economic life of the country. As many as sixty-seven per cent. of the population are dependent on agriculture for their livelihood and it is notorious that nowhere in India is agriculture paying in any sense of the term. Moreover, the extent and variety of the few industries that have grown up during the last hundred years or so have not been commensurate with the size of the country and, not infrequently, ill-equipped or under-capitalised concerns have sprung up without

efficient direction or management and, as a consequence, have gone to the wall no sooner than they were started. Thirdly and finally, owing to the absence of a well-directed industrial policy, many important industries which could have been started with some protection from the State have not come into being at all and to-day, after nearly a hundred years of industrialisation, India is dependent on other countries for some very vital necessities of her economic life.

It is principally for these reasons that the demand for some sort of industrial planning has become so very loud to-day. People of all shades of opinion are more or less agreed on the need for some effective lead which would break the vicious circle in which economic India finds herself to-day. Until lately, capital has been shy; the necessary equipments are lacking; there are very few first-rate technical experts available amongst Indians; entrepreneurs are often inefficient and occasionally dishonest; the country has been more or less in a state of industrial stagnation. It is no wonder, therefore, that in such perplexing circumstances, most people seek a remedy in some sort of industrial planning.

An Historical Retrospect

The demand for industrial planning has be-

come intensified ever since provincial autonomy was inaugurated under the new Government of India Act. Under this Act, the provinces as autonomous units have come to possess a very large measure of power in the matter of regulating, controlling and promoting industrial ventures and, as a consequence, most of the provincial governments have begun to pause and think how a harmonious industrial development can be promoted in the country.

It is true that the Indian Industrial Commission made some recommendations in the year 1918 with a view to accelerating the pace of industrial development in the country, but even its limited and halting suggestions were not acted upon for a considerable period. Sometime in 1929-30, however, a very effective lead in the matter was given by Sir M. Visvesvaraya in a thought-provoking survey of the potentialities of industrial development in India. In a later book, in the year 1933, he again made an eloquent plea for the setting up of some sort of an Industrial Development Council. But no definite action could be taken as the political situation was in a flux and the majority of those who had begun to think seriously in the matter preferred to wait till the new constitution was inaugurated.

The Indian National Congress and Industrial Planning

The new constitution was inaugurated on the 1st April, 1937. It was only in August of that year that the Working Committee of the Indian National Congress formulated a definite policy with regard to industrial and social planning. That month they recommended to the Congress Ministries the appointment of a Committee of experts "to consider urgent and vital problems the solution of which was necessary to any scheme of national reconstruction and social planning." * It was recognised that such solution would require extensive surveys and the collection of data, as well as a clearly defined social objective. It was further recognised that any of these problems could not be dealt with effectively on a provincial basis as the interests of adjoining provinces were interlinked. Finally, in July, 1938, it was decided as a preliminary step to convene a conference of the Ministers of Industries of the various provinces and call for a report of the existing industries operating in different provinces and the needs and possibilities of new ones.

The conference of Ministers of Industries of the various provinces was held in Delhi in October,

* *First Report of the National Planning Committee* (Bombay, 1939).

1938, and the thesis was laid down that the problems of poverty and unemployment, of national defence and of economic regeneration in general cannot be solved without industrialisation. It was decided that as a step towards such industrialisation, a comprehensive scheme of national planning should be drawn up—a scheme providing for the development of heavy key industries, medium scale industries and cottage industries, keeping in view the requirements, resources and peculiar circumstances of the country. With a view to doing the preliminary work for giving effect to the above policy, a Planning Committee was appointed.

Industrial Surveys in various Provinces

Meanwhile, the various Provincial Governments (particularly those which did not owe a definite allegiance to the Indian National Congress) had not been sitting idle. In the year 1938 the Sind Government commenced a survey into the question of acute unemployment and the Assam Government appointed a committee to go into the subject of industrial development in that province. In Bengal early in 1939 an Industrial Survey Committee was constituted with eminent scientists, economists, industrialists and businessmen to make a thorough investigation into

prevailing conditions of large, medium-sized, small and cottage industries in order to assess their future possibilities and also to suggest new lines of development.

The War Intervenes

Before, however, any action could be taken either on the recommendations of the National Planning Committee, set up by the Congress, or on the various provincial surveys, war broke out and all long-range schemes of industrial development under a peace economy had to be shelved. This does not mean that the tempo of industrial progress received a set-back: it only means that industry had, of necessity, to be harnessed for war production and, as a result, only such industries as contributed directly to the war effort received a fillip, while others—particularly such consumers' goods industries as were mainly for civilian requirements—were left to carry on by themselves. The ultimate result, however, has been that India has made considerable advance in certain industries and it can be asserted without any fear of contradiction that the net gain to India has been substantial. *

* For a detailed account of war-time industrial development in India, see Chapter V.

Post-War Planning

The need for a fresh approach towards the problem of industrial planning has been recently brought to a head by the general desire in every country for a thorough economic and social reconstruction at the end of the present war. This war has begot new needs and new ideas, and, unlike in the last war, the emphasis is being placed more on the economic and social aspects of post-war reconstruction than on the purely political aspects of it. The most important need, as far as India is concerned, is that the people must have that minimum of food, clothing and shelter without which, in the words of President Roosevelt, life itself would be impossible. This objective cannot, however, be fully achieved merely by increased production and better distribution of *agricultural* commodities. To increase the *per capita* income of the people and also to ensure that there is co-ordinated development of all the natural resources in this country, there must be proper *industrial* reconstruction as well, in the post-war period. To this end, there must be planning, *i.e.*, the drawing up of a comprehensive programme which would make the fullest and best use of all the various factors of production. *

* For further details about post-war plans for this country, see Chapter III

CHAPTER II

THE NATIONAL INCOME—A DIGRESSION

Estimates of the National Income

Estimates of average *per capita* income in India have been made since 1876, although satisfactory data on which such estimates can be made are conspicuously absent in India. In that year, Mr. Dadabhai Naoraji calculated that the average income per head of population was Rs. 20 per annum. In 1882, Earl Cromer (then Major Evelyn Baring) and Sir (then Mr.) David Barbour computed the average income per head at Rs. 27 per annum and in 1901 Digby put the figure at Rs. 17|4|- only. Official statisticians, on the other hand, questioned the accuracy of these figures and, by a separate calculation, arrived at a figure of not less, and might be more, than Rs. 30.

In recent years, attempts at more scientific calculation have been made. Mr. Findlay Shirras made an estimate for the years 1920-21 and 1921-22, including in his calculation items that had been left out by the earlier computers, and arrived at the figure Rs. 107 for the year 1921 and Rs. 116 for the year 1922. At the same time two sets of Indian economists, Messrs. Wadia and Joshi on the one hand and Messrs. Shah and

Khambata on the other, had made calculations relating to the years 1913-14 and 1921-22 and arrived at two figures, Rs. 44|5|6 and Rs. 74|0|6, which were very wide of the figures presented by Mr. Shirras. Recently, another Indian economist, Dr. V. K. R. V. Rao, has made still another estimate, relating to the year 1925-29, and has arrived at the figure of Rs. 77.9 per head per annum. *

Facts behind the Figures

Now, all these figures are apt to bewilder rather than help the general reader. The figures have been quoted just to show what a wide diversity of views is possible even among experts on a comparatively simple subject. While comparing the various computations, the following facts should, however, be remembered. Firstly, they relate to different dates and if account is taken of the change in prices on those dates, much of the wideness of the margin of computation will disappear. Secondly, the area covered by these various computations is not always the same. Thirdly and finally, no standardised data having been available, these estimators arrived at their figures by widely different methods and it is

* V. K. R. V. Rao : *An Essay on India's National Income* (London, 1939).

difficult to say which method is more accurate and scientific.

One thing, however, is certain. *Per capita* income in India is conspicuously low when judged by Western standards. Admittedly, it is not fair to make comparisons when the figures called by the same name in different countries do not have exactly the same value, but the following comparative figures are too eloquent to be whittled away by any such arguments :

*Income per capita in 1939 **

Name of country		Income per head per annum
United States	..	Rs. 1,406
Canada ..	..	„ 1,038
United Kingdom	..	„ 980
France ..	..	„ 621
Germany	..	„ 603
Japan ..	..	„ 218
India ..	..	„ 65

That *per capita* income in India is exceedingly low is also proved by the results of various intensive local enquiries that have been made from time to time. Three such investigators were

* Sir P. Thakurdas and others . 1 *Plan of Economic Development for India* (Bombay, 1944)

Dr. Mann in Bombay, Dr. Slater in Madras and Major Jack in Bengal. They all found out that *per capita* income in the selected areas where they carried their investigations was something between Rs. 42-14 and Rs. 52 during the period immediately towards the end of the last World War.

The importance of these figures lies in the fact that they all reinforce the arguments for industrial planning. Even the most optimistic observer has to admit that in India to-day the margin between sufficiency and scarcity is a very narrow one, and if the monsoon fails over a considerable area there is at least a tendency towards actual insufficiency for the country as a whole, to say nothing of the specially afflicted areas. In a recent memorandum prepared by the Government of India, it has been shown that on the basis that an adult requires a minimum of 16 oz. cereals, 3 oz. pulses, 2 oz. sugar, 6 oz. vegetables, 2 oz. fruits, $1\frac{1}{2}$ oz. fats and oils, 8 oz. of milk and 2.3 oz. of meat, fish and eggs per day, Indian production falls short of the national requirement by 1.5 million tons of pulses, .7 million tons of sugar, 9 million tons of vegetables, 2.6 million tons of fats and oils, 14 million tons of milk and 6 million tons of meat, fish and eggs. The deficit in production would not, however, have mattered very much, if the people of India, like the people

of many other countries, had a larger income to purchase these barest essentials of life from abroad. In other words, the main difficulty is the low *per capita* income, which in turn is due mainly to arrested industrial growth. The conclusion is, therefore, irresistible that agriculture must be supplemented by a well-balanced scheme of industrialisation and that the pre-war tempo of industrial development must be considerably accelerated before any substantial increase in the income per head can be achieved.

CHAPTER III

THE BOMBAY PLAN AND AFTER

The Bombay Plan : Its objectives

Earlier in this book, we referred to the general desire in every country for a thorough economic and social reconstruction at the end of the present war. This desire received its first concrete expression in this country in the famous Bombay Plan drawn up by Sir Purshottamdas Thakurdas and his seven colleagues.* In the words of the authors of the Plan, "the principal

* The Plan is called "A Plan of Economic Development for India" (Bombay, 1944)

objective of the plan is to bring about a doubling of the present *per capita* income within a period of fifteen years from the time the plan comes into operation. Allowing for an increase in population of 5 millions per annum, which is the rate disclosed by the last decennial census, we estimate that a doubling of the *per capita* income within a period of fifteen years would necessitate a trebling of the present aggregate national income. To achieve this increase, we propose that the plan should be so organised as to raise the net output of agriculture to a little over twice the present figure and that of industry, including both large and small industries, to approximately five times the present output." Briefly, the plan aims at "raising the national income to such a level that, after meeting the minimum requirements, every individual would be left with enough resources for the enjoyment of life and for cultural activities." According to the authors of the Plan, this can be achieved only by reducing the present overwhelming predominance of agriculture and by establishing a more balanced economy.

Industrial Planning in the Bombay Plan

A programme of intensive development of industries forms the keystone in the arch of this Plan. It is proposed that the percentage increase

in the net income from industry should be at least 500 at the end of 15 years, as against a percentage increase of only 130 in the case of agriculture and 200 in the case of services. In the programme, basic industries* would have priority over consumption goods industries in the earlier years, because the former are “the basis on which the economic superstructure envisaged in the plan will have to be erected.” Also, it is an essential part of the plan that adequate scope should be provided for small scale and cottage industries along with large scale industries, because in the consumption goods industries in particular, small scale and cottage industries would largely supplement the larger units. Finally, the Bombay Plan envisages that, to increase the net income from industry by at least 500 per cent. at the end of 15 years, the total amount of capital required would be in the neighbourhood of Rs. 4,480 crores.

Criticisms of the Bombay Plan

The authors of the Bombay Plan have frankly admitted that their object is “to put forward, as

* Basic industries would include, among others, the following groups: Power—electricity; Mining and metallurgy—iron and steel, aluminium, manganese, etc.; Engineering—machinery of all kinds, machine tools etc.; Chemicals—heavy chemicals, fertilisers, dyes, plastics, pharmaceuticals etc.; Armaments; Transport—railway engines and wagons, ship-building, automobile, aircraft, etc.; Cement.

a basis of discussion, a statement, in as concrete a form as possible, of the objectives to be kept in mind in economic planning in India, the general lines on which development should proceed and the demands which planning is likely to make on the country's resources." It deliberately refrains from making any reference to such essential matters as the organisation, methods and technique required for carrying out the plan.* It is not, therefore, fair to criticise the plan on the ground that the process of capital accumulation has not been explained or that the problems of finance and personnel have not been adequately dealt with. Nor is it a valid criticism to say that "the target of the Bombay Plan has been fixed at a level which is even lower than what was attained in Russia in a much shorter period."† It should not be overlooked that, on the eve of the Soviet regime, Russia had a much better and higher industrial tradition and a far superior class of technicians than India can boast of to-day. Also, what could be achieved in a Communistic system of regimentation and compulsory utilisation of all available man power and natural resources may

* Vide the opening paragraph of the Plan

† B. C. Ghose · *Planning for India*, Chapter IV (Calcutta, 1944)

not be so easy to attain in a system which is expected to remain capitalistic and individualistic even during the period of implementation of the plan.

Problems Ahead

The above defence of the Bombay Plan does not mean that it is perfect and there is no room left for improvement. As a matter of fact, it must be evident to any serious student of planning that, in order to attain the objective of a doubling of the *per capita* income within a period of fifteen years, the most rigorous control by Government over individual liberty and private enterprise may become necessary. There may have to be controls over the exchanges, prices and the money market, priorities in the allocation of imports and in the use of skilled labour, and perhaps very high taxation. The calculations of cost and the suggestions as to methods of financing the Plan will perhaps have to be examined more carefully. It is also not improbable that, even with all the best intentions and the utmost sacrifices conceivable, the goal will not be reached within a period of fifteen years. Nevertheless, the social and economic aims set out in the Plan are highly desirable, and the policy proposed for the development of industry is also generally sound.

The Bombay Plan and After

As already stated, the Bombay Plan was the first concrete expression of the desire of Indians to have a thorough economic and social adjustment at the end of the War. Naturally, therefore, it attracted wide attention and was acclaimed with high enthusiasm by all persons who wanted to see India marching in line with other advanced nations of the world. New plans were elaborated by different political groups and even the Government of India woke up to the necessity of giving the matter their immediate and primary attention. A Reconstruction Committee of the Council was set up at the Centre and counterparts thereof soon came into existence in every Province and major State. Eventually, about the middle of the year, a new and separate Department of Planning and Development was set up by the Government of India with one of the authors of the Bombay Plan (Sir Ardeshir Dalal) in charge. All these are signs of the fact that the country as a whole is keenly alive to the complexity and magnitude of the problems ahead, and is genuinely anxious that the *per capita* income and standard of living of the half-starved, ill-nourished and half-naked millions must be considerably increased in the years immediately ahead.

CHAPTER IV

A STUDY OF EXPORTS AND IMPORTS—ANOTHER DIGRESSION

Introductory

While drawing up a programme of industrial planning after the war, it would be desirable to study rather closely the foreign trade of the country—both during the period immediately before the outbreak of the war and after. If, as is generally assumed, the immediate objective of planning is to attain, as far as possible, national self-sufficiency and not primarily to capture foreign markets, this study becomes all the more imperative. In any case, even if the objective be somewhat different from what has been assumed above, a study of the main features and trends of our export and import trade would not be without some practical value.

Characteristics of the Foreign Trade of India

What strikes the superficial observer most is the fact that in this country the value of exports has always exceeded that of imports. There are isolated years (e.g., 1920-21 and 1921-22) when exports lagged behind imports in value, but there is no quinquennial period commencing from 1869-

70 (the Suez Canal was thrown open for navigation in 1869) when the average of exports fell below the average of imports. This habitual excess of exports over imports gave rise to the facile theory that it was a measure of the tribute paid by India to England for her political subjection, but as has been repeatedly pointed out by a number of economists, the excess represents payments of interest on debt of all types and annuities on account of railways and irrigation works, payments in connexion with Civil departments in India and the India Office, Army and Marine charges, payments for stores purchased and furlough allowances, and as such cannot be called a " drain " in any sense of the term. The inevitable conclusion, therefore, is that the mere excess of exports over imports does not furnish anything like a complete explanation of the backwardness and poverty of India. For that we must analyse the *nature* of exports and imports.

A careful analysis of the export and import trade of India shows that even now we are largely dependent for some of the ordinary requirements of life on imported manufactured goods. India is a vast country with a large home market and abundant raw materials, but instead of working these raw materials into consumable form, she seems to have preferred to export raw materials

and to import most of her requirements in respect of manufactured goods.

A Few Facts

In the year 1938-39 India exported about 162.79 crore of rupees worth of merchandise and, of these, manufactured goods * were worth only 47.61 crore of rupees, i.e., only 29.25 per cent. of the total. All the other items of export consisted of raw jute, raw cotton and raw wool, metals and ores, grains, pulses, spices and flour, wood and timber, fruits and vegetables, manures, hemp, hides and skins, fish, seeds and oilcakes, lac, mica, coffee and coir. Imports in the same year amounted to nearly 152.33 crore of rupees and of them only a small percentage (21.8 per cent.) consisted of raw materials or foodstuffs. These point to the fact that India's economic development has been most uneven and her industrial progress anything but satisfactory.

Detailed analysis of the individual items of export and import reveals another interesting thing. India exports many raw materials to other countries, but later on she has to re-import those very items, with only this difference that the articles so sent are sent in a finished form. It

* These again were mostly jute manufactures, cotton manufactures, wool manufactures and tea.

would certainly save costs and also promote industrial efficiency if these raw materials could be "finished" in India. Unfortunately, however, India lacks machinery and expert guidance, and consequently she has to re-purchase practically her own goods at a considerably high price. Thus we find that in the year 1937-38 while India exported nearly Rs. 30 crores worth of raw cotton, she had to import almost as much (Rs. 27 crores) of semi-finished and finished cotton goods. Similarly, she exported Rs. 84 lakhs worth of raw rubber and imported Rs. 189 lakhs worth of rubber manufactures; she exported Rs. 200 lakhs worth of raw tobacco and imported Rs. 85 lakhs worth of cigars, cigarettes and finished tobacco; she exported Rs. 5 crores worth of raw hides and skins and imported Rs. 22 lakhs worth of boots and shoes. *

It may be argued that these figures of exports and imports are misleading in as much as exports may indicate a real surplus and imports a real demand which manufacturers within the country are unable to meet. A close analysis, however, shows that the position is not so simple. Many raw materials *have* to be exported because there are no manufactories in India where they can be

* The present war has further demonstrated the pathetic dependence of India on foreign countries with regard to some essential chemicals and certain kinds of paper, film etc.

worked out into a finished form. As far as the cultivator is concerned, he is interested mainly in getting a decent price for his product and his position is not in the least bit affected whether his commodity is used in the factories of his own country or elsewhere. The prices he gets for such commodities as cotton, sugar-cane and tobacco which are both exported abroad and used in local mills and factories show that he neither gains nor loses by a policy of exportation for manufacture abroad in preference to one of internal consumption.

India's Pathetic Dependence on Foreign Countries

A detailed study of the items of export and import is instructive from another standpoint. Although a few industries have been fairly well established during the last few years, detailed figures of international trade show that even in those industries India is still pathetically dependent on foreign imports. Thus we find that India had to import $2\frac{1}{2}$ million lbs. of counts 31 to 40 and $4\frac{1}{2}$ million lbs. counts above 40 cotton twist and yarn in the year 1937-38, although these counts could easily have been manufactured (and in adequate quantities) in this country. So far as twofolds (doubles) were concerned, there was

no internal production at all and the same year India imported from abroad $14\frac{1}{2}$ million lbs. of this yarn. Again, in the range of fully manufactured cotton goods, India imported in 1937-38 as many as 591 million yards of cotton piece-goods (value nearly Rs. 12 crores) and there was a definite increase in the import of white and coloured goods. Other similar imports were Rs. 29 lakhs worth of hosiery, Rs. 43 lakhs worth of sewing thread and Rs. $6\frac{1}{2}$ lakhs worth of haberdashery and millinery. Again, the total value of imports of artificial silk and silk manufactures rose from Rs. 371 lakhs in 1936-37 to Rs. 487 lakhs in 1937-38 and there was a phenomenal import of nearly Rs. $2\frac{1}{2}$ crores worth of woollen manufactures, shawls, carpets and floor rugs alone.

These figures show that even within the range of well-established industries, development has been proceeding along certain stereotyped lines and very few industrialists have cared to analyse figures of import and embark on new items of production. It may be argued that no country, least of all India, can become self-sufficient in respect of *all* the items in a particular branch of industry, but in the opinion of the present writer, there is no reason why this should not be possible in at least those industries which are more or less well established. That it is possible for India to

become almost completely independent of foreign supplies in some items is proved by the recent phenomenal growth of the sugar industry : only Rs. 19 lakhs worth of sugar were imported in the year 1937-38 and that also mainly for re-export, but twenty years prior to this, the people of India were almost wholly dependent on foreign sugar. *

The War and India's Foreign Trade

India's foreign trade has undergone some changes as a result of the present war, but its character has not altered materially. As is inevitable, her imports have suffered and exports have increased considerably (the merchandise balance of trade in favour of India was Rs. 84.21 crores in 1942-43 as against Rs. 16.87 crores in 1938-39). The proportion of manufactured goods exported out of India increased from 29.25 per cent. in 1938-39 to 46.10 per cent. in 1942-43, while, on the imports side, the proportion of manufactured goods imported declined from 60.9 per cent. in 1938-39 to 54.1 per cent. in 1942-43. The relative increase in the export of manufactured goods need, however, be no cause for jubilation because it has been due to such abnormal causes as the need of Allied countries for huge quantities of

* *Review of the Trade of India in 1937-38* (New Delhi, 1939).

jute manufactures (mainly sandbags), for appreciable quantities of cotton yarn and cotton manufactures which their civil industries are finding difficult to produce on account of pre-occupation with war work, and for tea which, while no longer available from China, is being increasingly consumed to keep nerves steady. In addition, there has been a substantial fall in the export of certain raw materials because of difficulties of transport and of the entry of Japan, an important market for Indian raw cotton, into the war. On the imports side, the factors responsible for a decline have been rigid exchange and import control, the inability of many suppliers abroad to send goods for civilian consumption, and the shortage and high costs of transport. The fall in imports, particularly in manufactured goods, has, however, proved helpful to local industries, some of whom have made the fullest use of the opportunity and successfully filled in the gap.

The Problem Re-stated

We thus see that in the present war, our imports have suffered relatively more than our exports, but this has indirectly helped our local industries. Secondly, in the balance-sheet of total exports, the proportion of manufactured goods has steadily increased, but this has been due to

certain abnormal factors and need not cause any special jubilation. In other words, the character of India's foreign trade remains fundamentally the same even after five years of war.

It is, therefore, essential that we should study India's economic and industrial requirements from the standpoint of the *nature* of her exports and imports and not merely with reference to the countries with which she trades. The attention of our politicians at Delhi and Simla has been directed so long more to the question whether an agreement with Great Britain and the Dominions is beneath the dignity of India or not, and less to the fact that with judicious expansion it might become both feasible and convenient for India to become completely independent of foreign supplies in at least certain items of manufacture. The result has been that our industrial manufacturers have gone on extending their old plants or setting up additional ones mechanically and along traditional lines of production. Because cotton manufacture appeared to be quite paying, hundreds of cotton mills were set up all over the country, but there were few entrepreneurs who thought of setting up artificial silk or wool factories. Because sugar mill owners seemed to be making money rather easily, sugar mills were founded even in remote corners of India, but few thought of starting a rubber

factory or a salt manufactory. It should be one of the duties of Industrial Planning Commissions and Committees to analyse in detail the nature of overseas trade and to indicate in what specific directions development would be desirable.

CHAPTER V

THE WAR AND INDIAN INDUSTRIES

Industries on the eve of the War

Till the outbreak of the war in 1939, India was in the process of a very gradual and slow transformation from the agricultural to manufacturing economy. A few large-scale industries, such as iron and steel, cotton textiles, jute, paper, cement, sugar and coal had been established, but, judged by Western standards, the industrial output was low and the lines of development were traditional and conservative. On the one hand, some industries were suffering from over-production; on the other hand, fixed plant or equipment was lying idle in many manufactories. Then again, there were certain serious gaps in the industrial structure. Even as late as 1939, there were no machine manufacturing, ship-building,

automobile, aeroplane and aluminium smelting industries. The production of heavy chemicals, machine tools, electrical and general engineering apparatuses was also conspicuously low. Finally, in many industries, the machinery employed was out-of-date or obsolete and modern methods of rationalisation were virtually unknown.

The Impact of the War on Indian Industries

With the war came a rapid fall in the imports of many items of manufactured goods. The import of cotton manufactures fell from Rs. 1415 lakhs in 1938-39 to Rs. 137 lakhs in 1942-43; that of silk yarn and manufactures dwindled almost to nothing; only Rs. 36 lakhs worth of glass and earthenware were imported in 1942-43 as against Rs. 164 lakhs worth of goods imported in 1938-39; even under the head "machinery," imports fell from Rs. 1972 lakhs in 1938-39 to Rs. 1053 lakhs in 1942-43. India thus has had a unique opportunity to fill in these gaps by increasing her home production. Then again, there has been considerable additional demand from abroad for the products of Indian industries, particularly from Russia, China and the Near East. Of course most of this demand has been in connexion with the requirements of the war, but it was not merely munitions that were wanted : they wanted textiles

of various kinds, engineering and hardware stores, leather products and foodstuffs. From the outbreak of the war to the end of March 1943, the total value of contracts placed by the Indian Supply Department alone amounted to over Rs. 548 crores. *

A Detailed Analysis : Existing Industries

Let us examine in some detail to what extent and in what manner the war has benefited the more important industries in this country. We may take the cotton textiles industry first. On the eve of the war, this industry was in a state of depression, night shifts having been stopped in some mills and many looms and spindles having remained idle. But by 1942, as a result of huge Government orders and steep fall in imports, production had increased by 481 million yards over the production in 1939-40. The average dividends of cotton mill companies increased from 10.50 per cent. in 1939 to 14.44 per cent. per annum in 1941. §

In the jute industry, however, increased prosperity has been less marked, partly because the industry had already been fairly well-established and on a secure footing and partly because

* G. W. Tyson : *India Arms for Victory* (Allahabad, 1944).

§ P. C. Jain : *India Builds her War Economy* (Allahabad, 1943).

in this war the demand for sandbags—the principal item of production—has not been steady and continuous. On the other hand, as a result of the war, several new lines of manufacture have been taken up by the industry. For instance, the war has seen the development of the rot-proofed bag ; it has led to the production of paper-lined and roofing materials, hitherto unknown; dyed and polished yarn and twine are also being manufactured in certain mills; finally, different types of canvas and jute carpets are being produced by Indian jute mills—a development likely to prove of great value when peace returns.

The most spectacular development has taken place in the iron and steel industry. This is but natural because iron and steel are of fundamental importance in a modern war. It is true that India's production of steel is only a very small part of the total world output, * but what is more important is that the production of both pig iron and finished steel has at least doubled during the last five years. § Also, as in the jute industry, new lines of manufacture have been taken up by all the major steel concerns. The Tata Iron and Steel

* The world production of steel ingots and castings was 157,795 thousand tons in 1940: of this, India produced less than 3,000 thousand tons

§ For reasons of security, actual production figures of iron and steel are no longer published.

Co., Ltd., the premier steel concern in India, for instance, have produced, during this war, armour plate and armour-piercing steel conforming to the highest British specifications. They, and the Indian Iron and Steel Company and the newly formed Steel Corporation of Bengal, have been making all kinds of alloy steel, spring steel, nickel steel, high carbon steel, etc., on a scale which was almost unimaginable during the pre-war period. "The electric arc furnaces and high frequency induction furnaces, and the rolling and forging equipment of the Company, have enabled every type of high grade quality steel to be manufactured in India, and made the country relatively independent of outside imports The Company has also developed a successful welding technique for the electric and gas welding of chromemolybdenum steel required in the manufacture of aircraft, and has been conducting experiments so as to discover the possibilities of the manufacture of high silican steel sheets for motors and transformers etc., required by electrical industries." * In addition, a number of auxiliary industries have sprung up, manufacturing wire and wire products of every description,

* G. W. Tyson : *India Arms for Victory*, Chapter VI (Allahabad, 1944).

the rolls necessary for the production of steel, tools of various kinds, and tin plates and sheets.

Development has been impressive in two other industries—cement and paper. There are at present about 20 cement factories with a total capacity of about 2.8 million tons and 17 paper mills producing nearly 2 million cwts of paper. Imports of cement are now only nominal, while imports of paper, pasteboards and stationery in 1942-43 were less than half of the quantity imported in 1938-39.

In the tea industry also, production has increased appreciably—over 550 million lbs. of tea having been produced in 1943 as against 450 million lbs. produced in 1938. Similarly, the figures of production of sugar show an increase of nearly 100 per cent. over the figures of 1938-39, notwithstanding the fact that the internal demand for sugar has suffered owing to the all-round rise in the prices of sugar as well as other items of food.

A Bird's Eye-view of New Industries

Equally, if not more, interesting is the development of certain new industries as a result of the abnormal conditions created by the war.

The most important new industry is the aluminium manufacturing industry. Up to 1940,

there was not a single aluminium smelting or sheet-rolling mill in India.* Although there existed rich deposits of bauxite in C. P., Bihar, Bombay and certain Indian States, India depended entirely on imported aluminium (the imports amounted to 58,000 cwts. in 1938-39) before the outbreak of the war. It was only in 1937 that the Aluminium Corporation of India, Ltd., the first company of its type, was floated, but due to the outbreak of the war and consequent difficulty in getting the requisite machinery, actual production did not commence until the year 1943. Meanwhile, another company called the Aluminium Production Company of India, Ltd., was formed by English and Canadian interests and this latter began its operations early in 1943. The establishment of these two companies would be of great help to India during war as well as peace. Aluminium is an essential strategic raw material and as long as the war lasts, Indian aluminium will find a thousand and one uses in the production of munitions, machinery and aircraft. During

* There were quite a few companies manufacturing aluminium utensils for domestic use (e.g. Jeewanlal (1929) Ltd., Aluminium Manufacturing Company, Ltd., Wolverhampton Works Co., Ltd., Anant Shivaji Desai and Lallubhai Amichand), but all these firms used imported aluminium. The position became so precarious in the early years of the war that in 1940 these firms had no raw material supplies at all!

peace-time, aluminium would have larger domestic uses and would also be utilised in various types of factory equipment on account of its lightness and durability. Finally, the demand for it would certainly increase many times as and when the aircraft manufacturing industry develops.

Next in the order of importance are the paints and varnish industry, the glass industry and the plywood industry. Although these industries cannot be called "new" in the strict sense of the term (there existed quite a few factories manufacturing paints and varnishes, glass and plywood even before the outbreak of the present war), they have attained some sort of national importance only as a result of the conditions created by the war. There are now some 62 paints and varnish factories in India, although the first paint factory was established only in 1902. * The industry has received its impetus mainly as a result of the war—war is a voracious consumer of paints and finishes for multifarious purposes—but the prospects are bright in the post-war period also, as enamels, paints, distempers and dry colours are as much needed in peacetime. Similarly, there were only

* Of these, 22 are in the neighbourhood of Calcutta and 28 in the neighbourhood of Bombay. This pronounced localisation in Bombay and Calcutta is due largely to their being the most important consuming centres.

some 70 glass factories on the eve of the war (of these, as many as 26 were engaged in the manufacture of bangles alone), but the number now exceeds a hundred. In addition, new lines of production are being explored, the most recent success having been the manufacture of windolite, a substitute for glass for building purposes. Scientific glass apparatus of various kinds are also now being made in India and there has been an almost general change-over from old-fashioned pot furnaces to tank furnaces or modern pot furnaces. Thirdly, the plywood industry has had a phenomenal growth, the number of factories rising from 3 to 30 within a period of six or seven years. Here again, not only is ordinary plywood for tea-chests being manufactured, but resin-bonded plywood, which is specially required for aircraft and marine construction, is also being made.

Among other new ventures, mention may be made of the Hindusthan Aircraft Factory set up in Bangalore, mainly for the assembling of aircraft from imported parts, and a ship-building programme undertaken by the Scindia Steam Navigation Company at Vizagapatam. † As already

† In the manufacture of heavy chemicals and drugs also, development has been phenomenal. Sulphuric acid, alkalis, dyes and colours and drugs and medicines of various kinds are now being manufactured in prodigious quantities, mainly of course to meet the war demand, but partly to meet civilian needs as well.

noticed, there has been a remarkable growth in the manufacture of various kinds of engineering appliances, machines and machine tools. Bicycles are also being manufactured and India is fast becoming totally independent of imports in respect of all bicycle parts. Finally, India has been producing such diverse articles as sewing machines, electric fans, motors, transformers and insulators of various kinds, plastics, power alcohol, etc.

Cottage and Small-scale Industries

The war has considerably stimulated the cottage and small-scale industries as well. This has been due to three principal reasons. Firstly, a considerable proportion of the so-called "war" demand has gone to the small establishments. During two typical years, 1941-42 and 1942-43, direct war orders * to the value of Rs. 498 lakhs and Rs. 610 lakhs respectively were placed with small-scale industries alone. Secondly, owing to difficulties of transport, it became necessary to produce certain articles locally, and, in this, small establishments have naturally played an important part. Thirdly, the bigger factories and establishments have devoted themselves almost entirely to the mass production of certain

* These orders consisted of camouflage nets, woollen blankets, leather goods, pith helmets, durries, tentage, etc.

standard items which are most in demand, with the result that only the smaller establishments can cater for the special requirements of the consumer.

The resultant gain to India has been considerable. "A lot of raw material that would have otherwise lain dormant is being brought to light, and skilled labour in out of the way places is now being harnessed to the economic system of the country." As has been well stressed, if this dormant raw material or labour were harnessed under the roofs of big factories, it "would have meant the breaking down of a hard core of conservatism, no less than the infliction of social hardships and would have left lacunae of varying sizes in India's rural economy"—"a game that would not have been worth the candle."

Some Aspects of the War-time Development

The foregoing description would lead one to think that industries in India have made a tremendous advance during the present war and the future outlook is quite bright. That certain industries have reaped enormous profits (notwithstanding the excess profits tax and other "monstrosities" imposed by the State) is not denied. As a matter of fact, even a casual glance at the stocks and shares index would show that

investment in the shares of banks, cotton mills, jute mills, engineering and metal works, paper mills, cement factories—to take only a few examples—is considered to be very lucrative.

*“ Capital ” Stocks and Shares Index **

(August 1939=100)

		Govt. securities.	Banks.	Cotton Mills.	Jute Mills.	Engineering & Metal works.	Paper Mills.
August	1939	100	100	100	100	100	100
„	1940	95.0	97.1	131.5	116.5	116.7	192.7
„	1941	100.5	111.3	174.9	127.7	142.5	247.4
„	1942	99.1	117.1	210.7	128.5	155.2	281.9
„	1943	101.6	147.7	259.7	165.5	184.6	382.9
July	1944	104.7	168.0	249.6	210.1	247.5	420.8

The above sharp rise in the market value of certain industrial securities is, however, apt to be misleading. If we analyse the sum total of industrial activity in India during the present war, we would find that the net advance has been very much less than is generally made out to be.

“ Capital ” Index of Industrial and Trade Activity. †

(Base 1935=100)

	1938-39	1939-40	1940-41	1941-42	1942-43	1943-44
Indian Cotton consumption	120.4	114.3	128.2	150.3	154.4	167.3
Jute manufactures	121.8	128.0	110.8	122.1\$	117.8\$	99.7
Steel ingots	113.4	124.3	139.1	157.3 (e)	144.2 (e)	149.2 (e)
Pig iron	103.6	127.1	136.5	141.6 (e)	130.6 (e)	136.3 (e)
Paper	125.1	147.8	183.6	193.2\$	153.9\$	148.0\$
Coal	118.8	120.1	124.5	116.6 (e)	114.7 (e)	111.6 (e)
General Index	111.1	114.0	117.3	122.7\$	108.8\$	109.4\$
\$ Provisional. (e) Estimated.						

* Vide *Capital*, Calcutta (August 17, 1944).

† Vide *Capital*, Calcutta (August 3, 1944).

The same story is told in the *Monthly Survey of Business Conditions in India*, issued from New Delhi by the office of the Economic Adviser to the Govt. of India. In a recent issue of this informative monthly bulletin, we find the following striking figures of production of certain articles and of electrical energy sold :

	Production of cotton piece goods. (Million yds.)	Jute Manufactures (Thousand tons)	Tea * (Million lbs.)	Electric Energy sold † (Thousand units)
1938-39	4,269	1,222	385	1,681,827
1939-40	4,012	1,277	391	1,819,928
1940-41	4,269	1,108	415	1,940,624
1941-42	4,493	1,259	475	2,356,622
1942-43	4,100	1,042	453	2,416,004

We cannot, therefore, help coming to the conclusion that the so-called industrial advance is more superficial than real, and there is no justification whatsoever for feeling self-complacent about it.

Other Disquieting Features

Then there are other disquieting features in the situation. Many of the advances made have been dictated largely by immediate considerations of the war : the post-war industrial future of India

* The figures for tea are for cleandar years 1939 to 1943.

† The figures are for British India only and exclude units of electric energy generated and sold by the Public Works Department and military stations in British India.

appears to have had very little influence in shaping policy. As a result, nationalist India is extremely critical of Government's dilatoriness in the matter of establishment of the automobile industry, the broad-gauge locomotive factory and the fertilisers industry. Secondly, Indian industries are very much in need of rationalisation. Inefficient and antiquated plants must be pulled down, co-operation between different establishments within the same group of industry must replace the present cut-throat competition and there must be more of research within the industry itself. Existing industries have expanded with almost reckless zeal, without any eye to wear and tear, and as soon as peace returns, they will have to pay the price. Thirdly, the strains and stresses of this war have brought to the forefront India's singular deficiency in technical personnel. Notwithstanding the very considerable achievements of the all-India Technical Training Scheme, † India still lacks the requisite number of trained workers, chargemen and supervisors. Even demobilisation and the consequent release of the large number of persons at present employed in the Army, Navy, Air Force and Ordnance factories are not likely

† Under this scheme, suitable young men are given a rapid and intensive course of training in certain selected trades at State expense in certain approved institutions all over India.

to help matters, if the aim is, as in the Bombay Plan, to increase the net income from industry to some 500 per cent. More people must be trained up regularly and systematically, not merely for the lower paid jobs as mechanics, but also for superior supervisory posts.

All these only re-inforce the argument for planning on a comprehensive scale for the post-war period. We must take stock of our existing resources—raw materials, labour, capital and managerial ability—and see how best these can be integrated so as to bring about a rapid increase in industrial production and eventually in the aggregate of goods available for distribution.

CHAPTER VI

PROBLEMS OF INDUSTRIAL PLANNING : RAW MATERIALS

What Industrial Planning Includes

The phrase “industrial planning” conjures up such vague dreams and aspirations that it is necessary at the outset to understand what exactly it means. While it does not necessarily imply State ownership or even State control of all industrial undertakings, it does involve far-reach-

ing economic and social adjustments. Then again, in the actual drawing up of a plan, there must be close and detailed study of the various factors of production—raw materials (agricultural and forest products as well as minerals), capital, enterprise, labour, skilled workers and electric power, as also of such matters as marketing and transport which very much affect the price and competitive position of industrial products. In a country like India where nearly 70 per cent. of the population are dependent on agriculture for their livelihood, it also includes a study of (a) industries subsidiary to agriculture and (b) so-called cottage industries.

A word about the nature and method of this study. It is possible to make merely a subjective and detached study of the factors of industrial production and other allied matters, but the industrial planner cannot rest content with a mere study. He is more interested in devising practical courses of action whereby harmonious industrial development may be promoted and the rate of industrial production as a whole accelerated. His object is to make concrete suggestions about the steps which should be taken in this regard both by the State and by private entrepreneurs. He definitely wants to get the industrial machine going.

Turning to India, one is at first apt to be

bewildered by the vastness and complexity of the problem. The need for action appears so urgent and in so many directions that one is tempted to apply the surgeon's knife everywhere without pausing to consider whether the economic system can withstand so many incisions at a time. It is here that the industrial planner can make a valuable contribution. Based as his suggestions are on a study of the various phases of economic life and their complex and multifarious interactions, he would place first things first, and see to it that potentialities and resources are utilised gradually and in conformity with a definite objective and not in a haphazard or hasty manner.

Importance of Raw Materials

As has been stressed already, the problems that face the industrial planner are many and complex. First and foremost may be mentioned the problem of raw materials. Raw materials for almost every industry are being exported every year in large quantities on the plea that the producing country has no use for them. So far no comprehensive scientific study of the raw materials available has been made nor has it been adequately assessed to what extent ingredients which are still imported can be worked out from

India's own natural resources. On the other hand, methods of agricultural production are still unsatisfactory and the undoubtedly valuable scientific crop studies that have been, and are being, made in various Government farms and agricultural research stations have failed to make their impress on the average cultivator in the fields. * The plight of sugar manufacturers a few years ago, unable to keep factories going or meet demands in the market, because sugarcane of the requisite quantity and quality could not be had during the crushing season, shows that even in the matter of agricultural production drastic changes are necessary. Again, the cultivation of long-staple cotton has not been attempted yet on any large scale and the results of research work in the agricultural departments of Government have so far not been made available to illiterate cultivators. What prospects are there of the successful building up of a sugar industry or a cotton industry dealing in finer counts as long as the problem of raw materials, viz., adequate and effective supply of sugarcane and long-staple cotton is not tackled ?

The same remarks apply to forest and animal products and minerals. It is well-known that

* N. Das : *Agriculture in India—Past, Present and Future* (Calcutta, 1944).

India possesses an enormous wealth of timber which may be utilized for industrial purposes (e.g., manufacture of pulp for paper, matches, packing cases etc.) but no comprehensive exploration has yet been made nor has anyone seriously attempted to find out ways and means of commercial utilisation of these resources. Turning next to animal products, we find that not only is the quality of animals poor, but no proper survey has been made of the nature and quantity of such of these products as are still available. In minerals, on the other hand, India is supposed to be one of the largest and, in some cases, the foremost producer in the world, but, barring the cases of iron and steel, coal, petroleum, and, lately, aluminium, a primitive type of exploitation is almost all that we know of mining activity in this country.

Conclusion

The conclusion is thus inescapable that any scheme of industrial planning must take into account the fact that our knowledge about raw materials available for industry is meagre and incomplete. We must make a study of our raw materials (agricultural, forest, animal as well as mineral) before we can plan a scheme of industrialisation : we must know the nature and quality of these indispensable accessories before we com-

mence building up a structure. It is true that the present war has driven some of our industrialists and entrepreneurs to fathom many untold mysteries of nature that lie hidden under the earth or in the air, but a more planned and scientific survey than any yet undertaken would be a wise precaution.

CHAPTER VII

PROBLEMS OF INDUSTRIAL PLANNING : CAPITAL

A History of Capital Investments

The next problem that planners have to face is that of capital. A perusal of the history of industrial development in India shows that industrial activity here is not more than fifty or sixty years old. It is true that a few industrial undertakings were started in the first half of the nineteenth century—by British capitalists in the Bengal Presidency and by some Indian merchants in the province of Bombay, but they were more or less simple pioneer undertakings started in rather a haphazard fashion and none of them presented the elaborate problems of modern capitalistic enterprise—the problems of finance and management.

It was only after the *Swadeshi* movement of 1905 that more and more people turned their attention towards the promotion of new industrial ventures and then difficulties began to be encountered. These difficulties have increased with the passage of years. * Entrepreneurs complain that capital is inadequate both for the launching of new enterprises and for the development of existing ones and for this they blame the apathy of the general body of investors and the conservative policy of banks. Investors and the general public, on the other hand, reply that it is the defective management of industrial enterprises that is at the root of all the trouble. † The task of the industrial planner is to find out whether these apparently conflicting statements can be reconciled and, if so, how.

Capital Requirements of Industry

It is generally asserted that industrial development has been slow because both fixed and working capital had, and still has, to be obtained at rather a high cost. Although in recent years

* N. Das: *Banking and Industrial Finance in India* (Calcutta, 1936).

† Of course during the present war, there has been far too much money floating about and awaiting investment, but this is a purely abnormal state of affairs, arising out of the war. Moreover, this surplus money is concentrated in a few hands and does not reflect a lasting increase in ultimate financial resources.

the tendency has been towards securing block or fixed capital by public or private subscription of shares or debentures, it is well-known that the method of direct deposits and of providing money on private account by an individual or partnership has been the vogue in many industries. This latter method has in practice been found to be inefficient and uneconomical for various reasons. Firstly, owing to the prevalence of this system of finance, industry has come to be dominated too much by financial considerations, and too little by industrial ones. Secondly, no mill company has been able to develop its own system of finance independently of its managing agents. Thirdly, a direct consequence of financial control has been that managing agents have, in recent years, been inclined to usurp for themselves more and more power through the instrument of agency agreements, and outside investors have become rather unwilling to put their money in undertakings which are too rigidly controlled by certain groups of agents-financiers. *

How Capital is Obtained

Industrial undertakings in India often experience difficulty in finding working capital as

* For a detailed study, see N. Das : *Industrial Enterprise in India* (London, 1938).

well. Broadly speaking, there are four sources of working capital—(1) public deposits; (2) private deposits or money on private account provided by entrepreneurs, their friends, and/or managing agents; (3) advances by indigenous shroffs; (4) advances by joint-stock banks. Now, in all industrially advanced countries, by far the largest proportion of working capital is supplied by banks, but in India this has not been the case, and for a variety of reasons. From the very beginning, the orthodox tradition of English banks, viz., the practice of giving loans for short periods and against certain forms of security alone has been very rigidly followed by all joint-stock banks working in this country, both Indian and European. Most of the advances given by joint-stock banks are against tangible and marketable securities lodged or pledged with the lender or against personal credit with a second signature on the pro-note. In India there are very few clean advances without a second signature—a class of advances which occupy an important place in the highly developed banking systems of Europe and America. This rigidity in the matter of short-term credit has both affected, and been affected by, the managing agency system of organization in Indian industries. It has affected the system in two ways : firstly, it has made many

managing agents almost unwilling to go to a bank for a loan which would require them to pledge their stocks and thereby might entail loss of the confidence of their public depositors; secondly, the two-name rule has made the backing of managing agents in the matter of finance virtually indispensable and has thereby effectively curtailed the independence of industrial units. On the other hand, the very responsiveness of the managing agency system to their demands has made it possible for banks to remain rigid with regard to their loans and advances and to insist on full backing by the agents.

Rigidity is not the only defect of short-term credit in India. In recent years, it has tended to become costly also. In course of the enquiries made by the Indian Central Banking Enquiry Committee during 1929-30, it was repeatedly asserted by Indian entrepreneurs that the rates of interest charged to industry for loans and advances are generally higher than industry can bear. The larger joint-stock banks make advances usually at the official bank rate or at 1 per cent. higher; but the smaller ones—and there is a multitude of them—charge at least 2 to 4 per cent. higher. As a matter of fact, many banks admitted before the Banking Enquiry Committee referred to above that they usually advanced loans at

rates varying from 10 to 15 per cent. even on the security of mortgage bonds.

Problems of Industrial Finance

Industrial planners cannot afford to overlook these facts, because in the absence of a regular and fairly inexpensive supply of capital, any scheme of industrial expansion is likely to founder on the rocks of finance. The problem is to find out whether any special financial institutions should be set up (either with or without the backing of the State) to provide capital to industry or whether, by legislation as well as by persuasion, existing joint-stock banks should be forced to give up their present conservative attitude towards industrial promotions in general. There are dangers in madly rushing to either of these two alternatives. A State-aided Industrial Bank may easily lead to political pressure of various kinds on industrialists; it may also mean constant official interference in matters which should best be left to the decision of industrialists and entrepreneurs. Again, it is doubtful if, in the present position of the capital market in India, a private Industrial Bank with fairly decent financial resources should be started at all: the failure of the Tata Industrial Bank established in 1913 with a very efficient directorate and an intelligence

service composed of a number of select technical experts and commercial men must make any enthusiast pause and consider. On the other hand, in the present stage of industrial development, most of the Indian joint-stock banks hesitate to combine investment banking with commercial banking on the lines followed by German and other Continental banks. Banks in India are small with inadequate resources of paid-up capital and reserve, and their assets which consist largely of customers' deposits liable to be withdrawn at short notice, cannot obviously, without incurring serious risks, be locked up in long-term advances or loans to industry. Moreover, the whole history of industrial finance in India shows that investment banking by institutions which are organized as commercial banks inevitably leads to speculation and rash promotion. * Mixed type of business requires much experience and an established policy of sound banking, both of which the bulk of the joint-stock banks in India lack.

During the present war, however, in most of the belligerent countries, the State has become the principal supplier of finance. This may have been due to the peculiar difficulties inherent in the

* N. Das : *Banking and Industrial Finance in India* (Calcutta, 1936).

financing of war industries (new plants or extensions necessitated by the rapid and extensive change-over to war requirements had to be set up and additional working capital provided for, as defence programmes got into full stride), but the fact remains that orthodox ideas of finance have been given up with a view to speeding up production. At the end of the war, therefore, the same considerations might weigh with the industrial planner and a bold industrial programme may have to be supported by an equally bold financial policy. *

India's Potential Financial Resources

Behind the problem of finding capital for new industrial promotions lies the larger problem of India's potential financial resources. In the long run, the problem of industrial finance is a problem not only of the mobility of the financial resources of a country but also of its quantity and quality. The development of banking depends to a very great extent on the growth of the investment habit which in turn depends on the earning capacity of the people, their will to save, the incentive to save, and the facilities for investment. The

* S. K. Basu: *Industrial Credit in War and Post-War Economy* (Calcutta, 1944).

present position, however, is that although there are fairly good facilities for investment, people do not put enough of their savings either in banks or in industrial promotions. Perhaps the situation can be improved if existing banks are consolidated, all mushroom banks and loan offices weeded out and a comprehensive reform of banking law undertaken. But this by itself is not likely to lead to the results that are desired : better still would be the setting up of an organization which would teach the average investor in India to think industrially, to take and make bold ventures and to have a long view of things. Institutions like the Investment Trust Companies of Great Britain and the Unit Trusts and Investment Trusts of U.S.A. might usefully be set up in this country, with necessary modifications to suit local conditions. It may also be possible to start a Bankers' Industrial Development Company, as in England, whereby the large joint-stock banks could supply medium and long-time credits to industry.*

* *The Eastern Economist*, New Delhi (July 28, 1944).

CHAPTER VIII

PROBLEMS OF INDUSTRIAL PLANNING : LABOUR.

The Problem of Labour

No workable plan can be put forward unless due note is taken of the most important factor in industrial production, viz., labour. With the steady progress of large-scale industries and the rise of factory towns, modern labour problems as understood in the West have gradually come into prominence in this country. There is a new awakening and workmen have become more and more conscious of their privileges and rights. On the one hand, it is often assumed by employers that good conditions of work for labour involve a sacrifice for industry. Workers, on the other hand, seem to think that they can go on strike as often as they like and on all sorts of pretexts, and at the same time remain unaffected by the losses sustained by industry. The industrial planner's duty would be, firstly, to reconcile these two divergent ways of thinking and, secondly, to suggest how best labour can be harnessed as an important factor of production in industry.

The most interesting point about labour supply in the mines and factories of India is that most

factory labour is still drawn from rural areas and the migration from the rural areas to the factories is not generally a permanent exodus. It is, in the minds of those who undertake it and to a large extent in fact, a temporary transfer, and recruits to industry continue to regard as their home the place from which they have come. This does not mean that factory workers are all agriculturists : there are in the villages important sections of the population whose occupation is not primarily agricultural and may not be agricultural at all, and they generally drift to the towns to work in mills and factories. The desire to maintain contact with villages, however, remains and has important effects on the efficiency of labour as a whole. This home-sickness makes it difficult for industrial workers to get reconciled to changes in environments and to acquiesce in unsatisfactory conditions, and also necessitates a continuous turnover of employees, many of whom may be entirely new to a factory, its machines and methods of working, with a consequent loss of efficiency which reacts on both the management and the workers. On the other hand, this contact with villages has its advantages. Firstly, it means that most industrial workers have been brought up in more natural surroundings and have a better standard of physique than could be built

up in many industrial areas. Secondly, the combination of urban and rural life brings a width of outlook which is apt to be lacking in a purely urban population. Finally, the villages provide a measure of insurance against the effects of various changes which may reduce, interrupt or destroy the earning capacity of workers. *

Efficiency of Industrial Labour

The question of efficiency of industrial labour is so important that any scheme of industrial planning must suggest ways and means of increasing it. Although it is impossible to measure the comparative efficiency of labour directly, owing to differences in the processes adopted and in the organisation, machinery and quality of the raw materials used, it is universally admitted that the Indian industrial worker produces less per unit than the worker in any other country claiming to rank as a leading industrial nation. This is due partly to climate and to long hours of work in an uncongenial atmosphere, but the most powerful cause is the low standard of living. There is a vicious circle in this: weakness arises from the hardships to which the worker, who starts with an indifferent physique, is subjected and especially

* *Report of the Royal Commission on Labour in India* (New Delhi, 1931).

from his unsatisfactory diet and the conditions under which he is generally compelled to live; these hardships and conditions are mainly the result of inability to afford anything better, and this in turn arises from low efficiency. Thus “poverty leads to bad conditions, bad conditions to inefficiency and inefficiency to poverty”. Notwithstanding the advances made in industrialisation, the impression one gets of the life of industrial workers in this country is one of “great poverty, extremely overcrowded and unhygienic conditions of their homes, the lack of privacy and ordinary family life, the great paucity of educational, medical or recreational facilities, their chronic state of indebtedness and the slender margin of their staying power, their low money incomes and the poor quality and insufficient quantity of the food they consume.” *

The question now arises how the efficiency of labour can be increased. Here, it may be noted that the standard of living of our workers is so low that anything that may be done towards raising it would be reflected, in the long run, in increased efficiency. The standard of living may be raised in two ways—(a) by increasing the

* D. R. Gadgil: *Regulation of Wages and Other Problems of Industrial Labour in India* (Poona, 1943).

money wages paid by the employer and (b) by direct or indirect help given by the State or society to raise the standard of living. On the one hand, there should be regulation of wages, particularly of the lowest paid categories of workers, by Trade Boards. On the other hand, the State must spend, and spend generously, for the welfare of the workers. The State must accept responsibility for their education; it must arrange to provide nutritious food to them; it must embark on a well-thought-out and co-ordinated plan of slum clearance and house building; it must provide regular medical treatment; and, finally, it must create conditions which would give the worker a sense of security.

The Problem of Industrial Disputes

Another important matter which should engage the attention of industrial planners is the frequency of strikes and other industrial disputes. While assumption by the State of the responsibilities enumerated above is likely to improve the standard of living of the industrial worker and make him more contented, it would be rash to suppose that this would entirely eliminate future strikes and lockouts. Various causes, economic and political, are bound to lead to disputes between employers and employees, and it should

be the duty of the State to convince them that compulsory stoppage of work is harmful to both the parties. It should also be possible for employers to permit the formation of Workpeople's Welfare Committees or similar organisations, as these would enable the management and workers to get into closer touch, resulting in a better understanding of each other's point of view. An external machinery for settling disputes, i.e., some authority either entirely or partly independent of the industry concerned, may be helpful at times, but it can never be a proper and adequate substitute for an organisation *within* the industry to deal with disputes as they arise.

CHAPTER IX

A FURTHER DISCUSSION OF THE PROBLEM OF WAGES AND INDUSTRIAL EFFICIENCY

The Royal Commission on Labour and After

The last twenty-five years in India have been so very much crowded with almost continuous industrial strifes and the appointment of committees and commissions to enquire into, and make recommendations in connexion with, the causes of

these strifes that it is necessary to go into this labour question in some detail. For, although a Royal Commission on Labour went into this intricate subject with remarkable thoroughness during the year 1929-30 and published a very comprehensive report the following year, the fact that labour troubles still continue unabated should make us pause and enquire. Have all the recommendations of the Royal Commission been acted upon? Do any of their recommendations require modification now—fifteen years after they reported?

Here, two points may be emphasised. The Report of the Royal Commission on Labour has been the lodestar of all the various pieces of legislation which have been placed on the Indian Statute Book since its publication; and it will continue to be the text-book for social legislation and labour welfare in India for many years to come. Secondly, with the inauguration of provincial autonomy and the placing of the responsibility for labour welfare on Ministers answerable to the electorate for their acts of omission and commission, there has been an outburst of legislative measures for the amelioration of labour conditions in all the provinces. Every province has got a separate Minister for Labour and a special department to help the Minister in

his work. But this decentralisation has resulted in a certain lack of uniformity and consistency in the labour policies which are being pursued by different provinces. There is a danger that these disparities may be pushed too far : such disparities must eventually tend to weaken the competing power of some of the provinces, especially when they are, in addition, faced with increased Central and Provincial taxation.

It will be useful at this stage to make a rapid survey of the various measures that have been enacted during the last fifteen years to cope with this labour problem. Most of the recommendations of the Royal Commission with regard to expansion of the scope and improvement of existing Acts relating to conditions and hours of work in factories and mines, workmen's compensation, and control and supervision of the labour which migrates to tea and other plantations in Assam have already been implemented by amending or consolidating Acts. Acts amending the Trade Disputes Act of 1929 * and placing it permanently on the Statute Book were passed in 1932 and 1934.

* This Act was modelled to a large extent on the British Industrial Courts Act but it does not provide for any standing Industrial Court. Disputes can be referred either to Courts of Enquiry or to Boards of Conciliation. The Act also contains provisions rendering punishable by fine or imprisonment lightning strikes or lockouts in certain public utility services.

Acts to prevent the pledging of children and to facilitate the acquisition of land for industrial housing were passed in 1933. Legislation on the line of the British Truck Act to control deductions which employers may make from wages in respect of fines and to provide for early payment of wages due was passed early in 1936. § Various other proposals for new labour legislation in connexion with employer's liability, workmen's compensation, exemption of salaries and wages from attachment etc. were also considered by the Government of India in consultation with the various Provincial Governments, but as provincial autonomy was due to be inaugurated in April, 1937, and the responsibility for labour welfare placed on the shoulders of Provincial Ministers, legislation on most of these subjects was kept in abeyance. Provincial autonomy has, however, resulted in a large crop of legislative measures in some of the provinces. Thus, in Bombay in the year 1938 was passed the Bombay Industrial Disputes Act after a record debate of nearly 150 hours spread over 33 days. Further measures providing for the recognition of unions of workers by their employers, the grant of holi-

§ These include the Indian Factories Act, 1934, and the Payment of Wages Act, 1936.

days with pay during periods of sickness, the regulation of hours of work and rest periods, and the grant of holidays were adopted in 1939. In the Central Provinces, the Unregulated Factories Act was passed early in 1937, regulating the labour of women and children and making provision for the welfare of labour in factories to which the Factories Act of 1934 did not apply. Further steps have been taken in this province for the collection of statistics and for relief or benefits to workers in industrial occupations who are rendered unemployed and consequently destitute. In Bengal, an Act was passed in 1938 for the payment of maternity benefits to women workers in factories. Measures for regulation of hours of work and conditions of employment in shops have also been adopted. In addition, many of the provinces appointed Labour Enquiry Committees and their recommendations were generally given effect to by the Provincial Governments concerned. *

The Crucial Problem of Labour : Antagonism and Class Hatred

The above recital of legislative enactments shows that as far as legislation can help, no

* The most important of these Committees were—(1) the Bombay Textile Labour Enquiry Committee, (2) the Cownpore Labour Enquiry Committee, (3) the C. P. Textile Labour Enquiry Committee, and (4) the Bihar Labour Enquiry Committee.

Provincial Government has hesitated, and will hesitate, to adopt suitable measures for labour welfare in general. But this labour problem in India cannot be solved by the mere passing of new Acts and administering them through an army of factory inspectors and supervisors. Much more important is the general attitude of employers and workers towards each other. Until and unless the present feeling of antagonism and class hatred disappears, the future of industrialism in India will continue to cause anxiety to all who have the welfare of the people in their heart.

It is true that measures taken to ameliorate the conditions of labour will narrow the grounds on which differences of opinion can arise. But it would not entirely eliminate disputes, particularly as labour still continues to be exploited by outsiders for personal, political or revolutionary motives. It would, therefore, still be necessary to keep ready a machinery whereby compulsory conciliation or arbitration can be enforced.

Wages and Industrial Efficiency

The most crucial subject as far as labour is concerned is wages. To the worker and his dependants wages are the means of livelihood, although to the employer they are an item of productive costs. The importance of wages lies

in the fact that wages have important reactions on the standard of living and, through it, on industrial efficiency. "It is true that this effect may not be always immediate or direct. Indeed, in so far as low wages also imply low labour cost—and this is often possible in certain trades employing low grade manual labour—the employer may remain unconcerned about the workers' efficiency. Equally is it conceivable that an increase of wages may have little effect in improving the standard of living of workers and their efficiency. But over a long period of time and from the national point of view, the securing of a reasonable standard of earnings for the worker is an essential requisite of industrial efficiency." * It is because of this interaction of wages on industrial efficiency that the subject has to be gone into in detail by the industrial planner.

Money Wages and Real Wages

In the preceding chapter we have noticed that the efficiency of the Indian worker is extremely low and he hardly feels stimulated to make great efforts at improving his standard of living. And bad conditions of living lead to further inefficiency.

* P. S. Lokanathan : *Industrial Organisation in India* (London, 1935).

Now, this vicious circle can only be broken slowly, and the most vulnerable point where this can be broken is in the sphere of wages. As we have seen already, labour legislation has made tremendous progress in recent years and although it has not been found practicable to lay down a standard of minimum wages, various loopholes to evade payment of money wages or to cut down such wages by means of fines, impositions or surcharges have been effectively stopped. But the welfare of the industrial worker is determined not so much by *money* wages as by *real* wages, i.e., by what wages can buy. Although money wages have increased appreciably during the last twenty years, his real wages have not increased sufficiently to ensure a better standard of living. The fact that the Indian worker is not free to spend all his money wages on himself and his family offers the greatest difficulty to a solution of this problem of increasing efficiency by raising money wage rates. Heavy inroad upon the worker's income is caused by his dependence on the money-lender: the budget of the worker's family in any province and locality reveals the existence of a large amount of debt incurred on account of marriage, sickness, death or insufficient income to meet the primary necessities of life. There is also another difficulty. The Indian

worker has a fixed standard of living which is on a very low level, with the result that when he has earned enough to maintain that level he ceases to make any further effort to raise his standard. The coal miner's ambition is to return to his village as quickly as possible, and if a fortnight's continuous work rather than four weeks' work would give him a sufficient income to go back with some savings, he would go back sooner and give less time to mining. The tea garden worker, too, when in receipt of higher wages, would absent himself from the garden for a long period rather than work continuously and earn more. As a matter of fact, this uneconomic outlook on life on the part of workers has, in the past, often deterred employers from raising wages, as they have felt that workers do not respond by showing greater efficiency even when wages are raised.

Nevertheless, wage rates in India are so low and vary so considerably from unit to unit in the same industry or in the same locality that some increase as well as some attempt at standardisation would be justified. This could be secured by setting up bodies like the Trade Boards of England which have proved very successful in certain industries in that country. *

* Dorothy Sells: *British Wage Boards* (London, 1939).

Even granting that increase in money wages does not have an immediate and appreciable effect in India on standard of living and on efficiency, there are several ways open to employers in which the desired improvement can be brought about. Measures may be taken to ensure that money wages are not dissipated in wasteful expenditure; employers may also spend more on what is called "welfare work," because money spent by them in improving the conditions of their work-people is bound to react directly to the benefit of their workers and indirectly, therefore, to their own benefit. A lot may be done by establishing a Welfare Department in each large mill or factory and by paying greater attention to the improvement of internal conditions therein. Finally, a part of the responsibility for improvement may be taken over by trade unions organised on right lines—by the organisation of co-operative credit societies and co-operative stores, by the setting up of reading rooms and libraries, by arranging special adult educational courses and by the provision of legal assistance and other benefits.

Social Security Plans

No less urgent would be the need for drawing up plans for social security. In India at present,

there are no insurance schemes of any kind for the worker—whether he be a worker in a factory, in a shop or on land. So far, the State has accepted no responsibility for the sickness or unemployment of the worker, and such bold schemes of social security as have been drawn up by Sir William Beveridge for Great Britain would perhaps be considered utopian in this country.* Nevertheless, insurance against both sickness and unemployment appears so very necessary to strengthen the morale and efficiency of the Indian worker that due attention must be paid to this aspect of the problem in any scheme of industrial planning. In a country like India, there is a point beyond which increased money wages may not immediately stimulate the worker to think of, and live up to, a better standard, but there are many other ways in which the employer and the State can co-operate to secure for the worker greater security as well as better living.

* These schemes are considered "utopian" even in Sir William Beveridge's own country! *Vide* Sir William H. Beveridge: *The Pillars of Security* (London, 1943).

CHAPTER X

PROBLEMS OF INDUSTRIAL PLANNING : ENTREPRENEURS, EXPERTS AND SKILLED WORKERS

Introductory

An analysis of the factors of raw materials, capital and labour does not exhaust the problem of industrial planning. In any scheme of development, the part played by entrepreneurs, experts and skilled workers is equally, if not more, important.

Skilled Workers

We shall start with skilled workers first. Although India has the advantage of an almost inexhaustible supply of cheap manual labour suitable for industrial production, there is no class of permanent and trainable workers available. Employers have from time to time testified to the manual dexterity and adaptability of Indian artisans, but as a rule the average factory worker in India has little general education and no technical training at all. As a matter of fact, most industries are organised on the basis of cheap and illiterate labour, and consequently the cost of supervision is proportionately very high. *

* V. Anstey : *The Economic Development of India* (London, 1941).

The greatest difficulty is experienced in such industries as iron and steel, mining, engineering and electrical and chemical industries in which the highest degree of skill and intelligence is required of the operatives. Although the more important firms are trying to train up a class of skilled workers for these industries, the position is still anything but satisfactory. This is partly due to the fact that the more intelligent section of the people, those belonging to the so-called middle classes, have not yet been attracted to work in mills and factories and still prefer so-called "soft-handed occupations" to comparatively arduous manual work in any form. The result is that managers and proprietors have to recruit their workers mainly from the illiterate artisan class. It is true that the present war with its Technical Training Scheme and the Bevin Scheme has helped to turn out a large number of skilled workers. Nevertheless, the conclusion of all who are in charge of war production is that "India is still suffering from an acute shortage of skilled labour, particularly in the engineering and armaments trades The trained craftsman and technician constitutes an almost infinitesimal minority of India's population." *

* G. W. Tyson: *India Arms for Victory* (Allahabad, 1944).

In the ultimate analysis, the difficulty is still one of outlook on life and work. Unless and until the present prejudice against manual labour and the undoubtedly false sense of values with which the educated classes are imbued disappear, there is little hope of building up that class of skilled and intelligent workmen which forms the backbone of industry in Europe and America.

Technical Experts

Similar difficulty is experienced in finding properly qualified experts as well. In almost every branch of industry India has still to depend on foreign experts and pay a high price for their services. It is true that in recent years attempt has been made to train up batches of assistant experts from amongst the educated men of the country, but it cannot be said that progress in this direction has been commensurate with the needs of industry. Our educated young men are still unwilling to learn new things and specialise in new lines of industrial activity. Thus, it is very difficult to find a properly qualified Indian sugar technologist or a glass expert, although the total number of sugar mills and glass factories is by no means insignificant. Similarly, in such subjects as electrical development, fruit and fish canning, cutlery manufacture, wood distillation and fuel

technology there is hardly an Indian expert of the standing and experience of European and American experts available, albeit at an enormous price, in this country.

This dearth of technical experts is in part due to the fact that the more important industrial concerns are still owned or managed by Europeans who are reluctant to give the same facilities to Indians as they give to Europeans. Many enterprising Indian young men do not feel tempted to specialise in new branches of manufacture or trade because they know that there is no guarantee of their being able to secure decent employment even after they have acquired the necessary technological knowledge. But the very fact that even concerns owned or managed by Indians are compelled to requisition the services of foreign experts shows that the root of the trouble lies elsewhere.

Faulty Education and Paucity of Technical Experts

The paucity of indigenous experts must eventually be attributed to the defective system of education that prevails. From top to bottom the educational system in India is too literary and academic. Higher education here creates a distaste for manual labour; the system of passing

examinations with the help of cheap notes, shortcuts and guides kills all originality and incentive in the learner. As has been well put by a leading Indian economist, "university education in India is hopelessly inefficient and cheap. It is inefficient because it is cheap; and it is cheap, almost dirt-cheap, because public opinion in the country demands that it should be within everybody's reach." * On account of the cheapness and inefficiency of the present system of education, we find that a large number of scholars are attracted to colleges and universities who are too incompetent to benefit from a higher standard of instruction, or are too poor to make their due contribution towards maintenance of that standard. What are needed, therefore, are a drastic revision of the present educational policy, immediate disaffiliation of a number of second and third-rate educational institutions, and reorganisation of the entire system of technical and commercial education. †

Entrepreneurs

Finally, we come to entrepreneurs—those who promote and manage industry. The supreme need

* H. R. Soni: *Indian Industry and Its Problems*, Vol. I (Calcutta, 1934).

† *Vide* Report by the Central Advisory Board of Education: *Post-War Educational Development in India* (New Delhi, 1944).

of the country is for managers and foremen, for pioneers and entrepreneurs, and planning by itself cannot fill in this gap. Nevertheless, it is quite likely that a carefully thought out scheme of planning would create an environment favourable to the rise of a better class of promoters and managers of industry. Up till now few of the wealthy men of this country have cared to invest their capital and enterprise in industrial concerns, but it is not inconceivable that as a result of the stimulus which must come when any sound scheme of industrial development is put in operation, many persons, hitherto shy and apathetic, would like to put in their money, and also try their ability, in industry. Of course, a number of measures will have to be taken to secure better efficiency and honesty in management. The Indian Companies' Act may have to be still further amended; it may become necessary to set up some form of a Board of National Investment to overcome the shyness of investors and to bridge the gulf between the investigation and promotion of a proposition, and its finance; it may even become necessary to send potential entrepreneurs abroad to get experience in the practical management of shops and factories and in the standards and requirements of markets. It is difficult to say at this stage what precise steps should be taken, but

this much is certain that the problems of industrial management and industrial leadership will have to be tackled no less seriously than the problems of raw materials, capital and labour.

CHAPTER XI

INDUSTRIAL PROMOTION AND INDUSTRIAL MANAGEMENT.

An Historical Retrospect

Any scheme for the development of new industries and expansion of old ones has eventually to be translated into reality with the help of industrial promoters and managers. A study of the various aspects of industrial promotion and industrial management is, therefore, extremely important. This is particularly so in India where so far the best brains have not been sufficiently attracted to industry and trade.

The history of the growth of industries in this country shows that they have owed their development primarily to two classes of people : British merchants who had come out to represent British trading firms, and the cotton merchants of Bombay and, later, of Ahmedabad and other centres.

“Industrial advancement in India was in the early days in the hands of men who were keen businessmen and technical experts.” Being primarily merchants, they took to only such lines of business where the chances of making mistakes were comparatively small. “From one industry they turned to another not only because the experience gained in the one was equally valuable in the other, so that all they needed was to get experts versed in the technique of each industry, but also because each line of business opened the way for another, and the market for the products of one line of business was found in another.” The whole task of pioneering, promoting and managing mills and factories thus fell on the shoulders of a few merchants and, later, to this was added the additional task of financing them, particularly in areas like Bombay and Ahmedabad. Industrial enterprise in India thus came to be dominated by groups of so-called managing agents or managing agency firms.* “The rise of the managing agents was due to the fact that they fulfilled the role of promoters and pioneers in many of the newly established industries in India; they came into prominence because

* For a detailed survey, see P. S. Lokanathan: *Industrial Organisation in India* (London, 1955).

it was they and they alone who could supply a regular stream of trained and efficient managers; and they gathered power as they found that the capital market was notoriously shy, and that industry looked to them for financial aid, both direct and indirect. The continuance and prevalence of the managing agency system in industrial enterprise in India has been due more to this last factor than to any other. Banks were not prepared to finance the long-term needs of industry, and were unable to provide anything better than 'circulating' capital and even that for short periods; on the other hand, many of the enterprises were undercapitalised at the very outset and needed adequate financial assistance or guarantee at every stage of their activity. So the managing agency system came to dominate Indian industry." *

Services Performed by Managing Agents

This unique phenomenon of mills, factories, mines and plantations being promoted and managed by a few groups of individuals or firms has had important repercussions on industrial enterprise in India. In a sense, managing agents have performed services which issue houses have

* N. Das: *Industrial Enterprise in India* (London, 1938).

done in other countries. "The name of the managing agent was in itself a guarantee to the public of the soundness of the enterprise in which he was interested, and the absence of it in a public issue a presumption of its untrustworthiness. In this way the public came more and more to argue that they were not to risk their capital in ventures not backed by one of the well-known agency firms. A great deal of waste was thus avoided." Secondly, as the interests of managing agents were linked up with the future prosperity of the concerns they had started, they were anxious to make every effort to bring them to a successful conclusion. "The close association of ownership and control resulted in a unity of aim and motive, and the common defects of joint-stock enterprise arising from diffused authority were obviated by a system in which managing agents were able to work with a single-minded purpose and free from the shackles of control by a Board of Directors." Thirdly, by themselves nursing industrial enterprises in the initial stages and throwing the capital open to public subscription only when the concerns had proved a success, managing agents helped to bridge the gulf between the sources of demand for capital and the sources of its supply.

Drawbacks of the Managing Agency System

In course of time, however, the system came to be associated with a considerable amount of inefficiency and even laziness and fraud. The very dominance of managing agents * in the sphere of industrial activity gave to the more unscrupulous amongst them opportunities for dishonesty. With the help of agreements, frequently non-terminable, managing agents could elect themselves to be the non-changeable, non-removable and permanent secretaries, treasurers and agents of the companies they managed. They could also eke out for themselves a number of extra allowances besides the commission to which they were strictly entitled under their agreements. The device of having to pay compensation to the managing agent, if and when the business of a

* This dominance has been due to certain special circumstances. Firstly, in many industries, managing agents themselves or their friends had, and still have, holdings of substantial blocks of shares. Secondly, control has been secured by managing agents remaining the principal creditors (or guarantors of credit) of the companies managed. Thirdly, even when managing agents did not hold any substantial percentage of shares, they were assured of control because the majority of shareholders, being distributed over long distances, were unable to unite effectively against their dictatorial management. Fourthly, although the managing agency system had been in existence in India for well over 70 or 80 years, the Indian law relating to companies never statutorily recognised them or curtailed their activities until the year 1936, and consequently unscrupulous agents could easily do a lot of mischief without actually transgressing the law. Finally, managing agents secured enormous control by means of their written agreements.

company was transferred during the pendency of an agreement to another party, also put a premium on inefficiency and dishonesty. In not a few cases, winding up took place in consequence of mismanagement by the managing agent, unprofitable trading conditions or the deliberate action of the managing agent himself. In most of these cases managing agents did not care to discharge their duties as managers faithfully and efficiently because they knew they were 'insured' by the compensation clause. The practices of getting supplementary or secret profits, of assignment of functions and interests, of inter-investment of funds and of having several companies under the same management led to such abuses that the State was compelled to pass a comprehensive Indian Companies' Act in the year 1936. *

The Indian Companies' Act of 1936 and the Problem of Industrial Enterprise

This Act laid down a number of novel provisions regarding managing agents, directors and shareholders and we may briefly note here what their repercussions have been on in-

* For a detailed account of these and other practices and of the economic significance of the provisions of the new Indian Companies' Act, the reader is referred to Chapters IV and VI of the writer's *Industrial Enterprise in India* (London, 1938).

dustrial enterprise in this country. The new rules and regulations have certainly not killed the managing agency system ; on the other hand, they have led to a better standard of conduct among all managing agents. The limitations on the powers of agents and directors have also helped better conduct of business and given some protection to share-holders against the autocracy of the management. But the Act by itself has not certainly solved the problems of industrial management. Firstly, it is necessary that those who manage a company, whether they are managing agents, managing directors or a Board of Directors, must try to be more efficient and honest than they have been so far. Secondly, the ever-increasing body of share-holders and investors must begin to take an intelligent interest in the affairs of the concerns in which they have put in their money, so that it may become increasingly difficult for the management to remain inefficient, lazy or dishonest. No amount of legislation can ensure either of these two pre-requisites.

The Rise of a New Class of Entrepreneurs

An encouraging sign of the day is the rise of a new class of entrepreneurs—persons who do not necessarily belong to old managing agency firms. This is particularly noticeable in new industries

like sugar, cement, paper, paints and varnish, glass, chemicals and match. In an ever-increasing number entrepreneurs unconnected with managing agency firms are starting new undertakings, although in view of the almost morbid faith that people still have in enterprises controlled and managed by managing agents, they sometimes band themselves into *ad hoc* firms of agents. Of course there is a danger that these entrepreneurs may try to do things rather too fast and without careful planning and fore-thought, and may ultimately bring ruin upon themselves and shareholders, but the very fact that a new class of entrepreneurs has been able to rise notwithstanding the dominance of managing agents over the entire field of industrial activity should give the industrial planner food for thought. It would appear that if India launched a comprehensive scheme of industrial reconstruction to-day, there would be less dearth of entrepreneurs, promoters and managers now than, say, twenty years ago. Even so, caution would be needed, because in the history of industrialism in India is recorded a very large number of company failures.

Company Failures

Although ever since the end of the last War,

the number of joint-stock companies at work in India has steadily increased, the increase has by no means been phenomenal and, as a matter of fact, the average paid-up capital has remained more or less stationary. On the other hand, the figure of company failures is quite impressive and it has been found that, prior to the outbreak of the present war, on an average, more than half of the companies newly registered every year failed.

An analysis of the causes of company failures in India reveals that while lack of experience and technical knowledge or lack of capital has been responsible for many casualties, casualties due to dishonesty and planned attempts by shrewd persons to exploit the public have not also been few. * The old Company law had left several loopholes for unscrupulous promoters, and shareholders had no protection against their actions unless those were found to be within the orbit of criminal breach of trust. On the other hand, very often *bona fide* floatations launched with the best of intentions and enthusiasm have come to grief because their prospects and possibilities had not been carefully scrutinised in advance.

In one way in particular, the old law con-

* *Report on the Growth of Joint-Stock Companies in Bengal* (Calcutta, 1939).

nived at a kind of incompetence. The determination of the minimum capital with which to start business had been left practically to the discretion of promoters, subject only to the condition that the certificate for commencement of business should be issued only on prior realisation of 5 per cent. of the subscribed capital as the application money. This percentage very often proved far too short of the capital required even for the acquisition of land and the construction of buildings and factory and so the provision failed to afford any assurance that the company had attained the actual working stage. Numerous cases occurred in which, despite serious efforts to procure sufficient funds by disposing of its shares, a company failed to secure any substantial amount in excess of the statutory minimum, with the result that it had to be closed down after the little money collected had been spent in sundry preliminary expenses. The Indian Companies' Act of 1936 includes important provisions on this aspect of company promotion and it is hoped that they will check the further growth of mushroom companies and thereby diminish the number of company failures. The newly instituted "control over capital issues" is also likely to help, if control is exercised in a judicious manner and with a view to protecting the interests of investors.

CHAPTER XII

ELECTRICAL DEVELOPMENT AND INDUSTRIAL PLANNING

Introductory

Until recently, most industries in India obtained their power from sources other than electricity, partly because electricity was not cheap enough and partly because of a certain amount of inertia and conservatism. In countries like Germany, Japan, the U.S.A. and U.S.S.R., however, the use of electricity as a source of power has so completely altered the character and tempo of industrial development that the question of developing the electrical resources of this country has now become a most vital item in the programme of industrial development. The phenomenal progress made within the last two decades by a comparatively backward country like the U.S.S.R., in particular, has brought the question of electrical development to the forefront of all discussions about planning.

A Review of Electrical Development in the U.S.S.R.

In the Russia of the pre-revolutionary period, the level of electrical power equipment was extremely low and the cost of production very high. The only big stations were in Moscow, Leningrad

and Baku, and notwithstanding the fact that Russia had the richest reserves in the world of all kinds of power resources, power supply was based on coal from the Donetz basin and oil from Caucasia.

After the Revolution, Lenin propounded his famous thesis that large-scale industry corresponding to up-to-date technique and capable of reorganising agriculture pre-supposed electrification of the whole country. In 1920, at the instance of Lenin, a Commission of 200 most eminent scientists and engineers of the country, with Mr. G. N. Kazhizhanovsky at its head, was formed to elaborate the plan for the Governmental electrification of Russia (Goelro). The plan was in two parts. On the one hand, there was a plan providing for the restoration of the pre-Revolution electric power economy, the extension and reconstruction of the existing electric stations and the development of the electric network. On the other hand, there was a plan for the construction of thirty (later increased to forty-two) regional electric stations with a total capacity of 1,500,000 kws. In pursuance of these plans, the development of power resources proceeded at such a terrific speed that, by 1935, the U.S.S.R. stood third in the world and second in Europe in the total output of electrical energy.

The most important point to be noticed in this connexion is the rapid and varied development of industries in the U.S.R.R. This development has become possible mainly because industry can draw freely upon electrical power which is available practically in all corners of this vast sub-continent and at a very cheap rate. To take a few concrete examples, in 1928, 85 per cent. of the coal mines were worked by hand: but in 1935, 78 per cent. of the mines were worked by machines fed by electricity. Again, before the first Five Year Plan, there were no fully mechanised blast furnaces, but by 1935 there had been established 26 fully mechanised electrically equipped blast furnaces, resulting in the building up of entirely new industries, such as electric ferro-alloys, electrical steel, aluminium, magnesium etc. The productivity of these and other industries has also increased considerably—so much so that to-day the U.S.R.R. ranks first in the world in the production of agricultural machinery, beet sugar and tractors, second in the production of gold, iron ore, machines and freight cars, and third in the production of phosphates and steel. *

* A. Rothstein (Editor) : *U. S. S. R. Speaks For Itself* (London, 1943).

Another point to be noticed in this story of gigantic power development is that the U.S.S.R. has made the fullest use of all her power resources—coal, peat, oil as well as water. The power supply is now centralised and the three inter-regional power systems (Southern, Ural and Central Industrial) have been inter-connected. The distribution of loads among the various units and stations in each inter-regional system is based, among others, on the principle that all electrical energy available must be generated.

The Problem in India

In India, the prospects of extensive power development are complicated by the facts that her coal resources are localised in one or two provinces and that she is not particularly rich in mineral oil. It is, therefore, obvious that she will have to depend for much of her power on water resources. Fortunately, there is no dearth of this source of power and the preliminary technical investigations that have been made confirm the view held in many quarters that the creation of large hydro-electric blocks, supplying power cheaply and evenly all over the country, is both an economic and a practicable proposition.

Viewed from the practical aspect, a national programme of electrical development would be of

direct help to industry, to large-scale irrigation and de-watering projects and to electro-chemical and metallurgical production and production of inorganic fertilizers. Such a programme should, however, be undertaken by the State,* as privately managed companies are likely to be influenced by considerations of immediate profit or loss. It may also be necessary to establish, in each province and major State, an expert and semi-independent Electricity Supply Board to undertake continued and systematic survey of power resources, to formulate schemes which would make the fullest use of local power resources and would associate electric power stations with industrial and agricultural development, to devise how best inter-connections may be effected between stations in the same zone, stations in different zones and stations of sister provinces and States, and to actually implement all schemes of electrical development.

* It is assumed that the so-called "financial test" would not be too rigidly applied to power development projects. The benefits of electrical development should not be calculated in terms merely of capital and interest, revenue and expenditure. Against possible losses on any scheme should be weighed the benefits of increased and wider industrial employment, mechanisation of agriculture, improved irrigation, improved drainage and a consequent general rise in the standard of living.

CHAPTER XIII

OTHER PROBLEMS OF INDUSTRIAL PLANNING

Introductory

So far we have considered the more important factors of industrial development, viz., raw materials, capital, labour, electric power, and entrepreneurs, experts and skilled workers, but it will be a mistake to suppose that the pace or intensity of industrial production is not affected by any other factors. Industrialisation is a complex process in which a number of facts and circumstances contribute their quota and no industrial planner can afford to minimise or ignore the part played by any of them.

The Problem of Transport

We may take the question of transport first. Even now there are thousands of villages and small towns in this country which are miles away from any proper communication system, with the result that the products of industry fail to reach many potential consumers. Again, the system of railway freights operates in such a manner that many industries are unable to get their raw materials at an economic price, with the result that they cannot compete on equal terms with

sister undertakings of other countries. In any programme of industrial development, therefore, it would be necessary (a) to considerably add to, and improve upon, the existing road system and (b) to re-shape the railway freights policy with particular reference to the needs of industry. The explanation of railway authorities that rates are governed by the principle of what the traffic can bear has never satisfied the industrialists of this country, and the sooner a policy is adopted which would not prove unfair towards indigenous manufactures and raw materials for industrial products, the better.

The Question of Protective Tariffs

Next to transport is the question of protective tariffs. So much has been said about the merits and drawbacks of protection that it will be superfluous to enter into that discussion again. Opinion in India is definitely in favour of protection, and the question now is how best protection can be granted. Should India adhere to the principles and conditions of discriminating protection laid down by the Indian Fiscal Commission of 1921-22 or should she enter into the method of bilateral agreements with countries with whom she normally trades? Are protective customs duties enough or must some industries have direct finan-

cial aid from the State in the shape of a direct subsidy or bounty or a guarantee of purchase of a minimum quantity of output at fixed prices? These and similar questions cannot be shelved by the industrial planner, as the progress of an industry may virtually depend on how these questions are answered and policy is framed.

Industrial Decentralisation

Then there is the question of industrial decentralisation. If all the industrial establishments at work in India to-day could be conveniently plotted on a map, it would be seen that they are mostly located in a few well-defined areas and that vast stretches of the country are without any industrial units at all.* Now, the location of industry in a particular area depends on a number of factors, natural as well as functional, and one cannot obviously dictate that an industry should grow up in this or that locality. At the same time, it cannot be denied that there is an uneconomic pressure on land in many districts in India and it is almost an economic necessity

* A recent survey of industries in Bengal reveals the extraordinary congestion of factories in only four districts, viz., Hooghly, Calcutta, 24-Parganas and Howrah, accounting for more than 60 per cent. of the total factory establishment in the province and more than 85 per cent. of the workers employed. Very similar things prevail in Bombay and the U. P. as well.

to stimulate the development of industries in under-developed districts, not only to provide extra income to the people but also to relieve the pressure on land by switching off a section of the people to industrial channels. The industrial planner should consider whether new industries can be encouraged in the comparatively under-developed areas, with special reference not so much to the needs of those areas as to the question of costs. If certain areas possess comparative, or even equal, advantages with regard to, say, supply of raw materials, labour, power and market, there is no reason why these sites should not be preferred to over-developed areas for the starting of new industries. As a matter of fact, it may be economically expedient as well as socially desirable to bring industry to the workers of a particular area rather than bring the workers to certain traditional industrial sites.

Agriculture and Industry

Closely allied to industrial decentralisation is the problem of striking a balance between the conflicting claims of agriculture and industry. It is almost a truism that there are more people on land than are really required for its thorough cultivation. To put a stop to the widespread unemployment and poverty of the classes dependent

on land for their livelihood, some withdrawal is undoubtedly necessary. Of the 389 million people of India, only 30 millions live in urban areas and are dependent on industry, transport or trade for their livelihood. The number of actual workers in the various branches of industry, transport and trade is still less—only 23 millions. This glaring disparity must be modified: the country must divide its capital and labour between agriculture and industry in such a manner as to maximise the national dividend.

CHAPTER XIV

COTTAGE INDUSTRIES AND INDUSTRIAL PLANNING

Introductory

So long we have studied the problem of industrial development in India from the standpoint of large-scale industries alone—industries capable of producing goods on a vast scale and at cheap prices and of meeting a large market, both internal and external. But from time immemorial there have existed in India industries that are carried on in a modest manner in rural homes and cottage establishments and although some of them are to-day in a state of decay owing

to foreign competition and the impact of machine-made goods, they still provide partial employment to a vast body of cultivators and full employment to an equally large body of artisans. Their importance in any scheme of national planning is, therefore, obvious.

Large-scale Industries versus Cottage Industries

In recent years there has been a certain conflict of industrial ideologies on this question of large-scale industries *versus* cottage industries. One school of thought has held that the only way in which the national dividend can be increased is by establishing large industries all over the country in the manner in which this has been done in Great Britain, Germany, the U.S.A. and U.S.S.R. The other school of thought has denounced large-scale industrialisation on the ground that "factory life is killing, that it prevents the worker from living a fuller life, that it imposes a heavy strain on his nerves and saps his physical life." Now a closer scrutiny would show that while there is an element of truth in the thoughts of both these schools, it is possible to evolve a scheme wherein both large-scale industries and small cottage industries can play their part. Even in the most advanced countries of the West, a number of small industries exist and flourish side by side

with large-scale industries. For example, in pre-war France more than 95 per cent. of the industrial establishments employed less than 100 workers each and of these again the great majority employed less than 50 workers each. Even in England, the home of large-scale industry, before the last War, in the majority of trades the number of employees per establishment was below twenty. In pre-war Japan 60 per cent. of the industrial population gained their livelihood in a multitude of small undertakings employing not more than five workmen apiece. *

The Case of Cottage Industries Re-stated

When we consider the case of cottage industries, certain points should be remembered. To say that in any scheme of industrialisation the multiplication of small-scale enterprises is not only inevitable but also desirable is not to admit that all cottage industries of the old type should be left intact and in undiminished vigour. Some old, lifeless industries must inevitably give way to newer and better organised industries, although the basic technique of the former may not have been substantially different from that of the latter. Moreover, it is well-known that the economic

* G. E. Hubbard: *Eastern Industrialisation and its Effect on the West* (London, 1935).

transition in India during the latter half of the last century caused great suffering and demoralisation to workers engaged in a number of handicrafts and we may safely assume that further industrialisation will only accelerate this process. Even in Japan the opening up of foreign trade in the second half of the nineteenth century greatly altered the balance in the industrial life of that country : many of those who suffered from foreign competition were compelled to start other industries which were profitable, and there was a general movement of capital and labour into the more favourably situated industries. In the end there came about a naturally economic distribution of capital and labour. The surplus capital and labour accumulated as a result of the introduction of machinery and the better distribution of capital were employed in various new industries. Much of the new land which had been used for cotton-growing was given over to tea and mulberry cultivation, and other industries producing what are now generally classed as "miscellaneous goods," such as matting, hats, lacquers, braids, toys, china and porcelain, were started.* In India, too, it may be safely predicted, a similar redistribution is inevitable and

* S. Uyehara: *The Industry and Trade of Japan* (London, 1936).

one need not grieve overmuch if some cottage industries have to disappear from the industrial map of the country.

This does not mean that no steps should be taken to rehabilitate or develop cottage industries. As has been already emphasised, cottage industries are bound to co-exist with large scale industries for a long time to come. Although some old industries like hand-spinning have already succumbed and the country is not likely to gain by attempts to resuscitate them by artificial means, there are other cottage industries which possess certain essential and vital qualities and which may be lifted out of their state of suspended animation by the adoption of certain specific measures. There are cottage industries which have so long been forced to remain in their present disorganised state because the merchant-financiers who have the artisans in their grip are interested in keeping them there indefinitely so that they may continue merrily their game of exploitation. There are other industries where the workers are steeped in conservatism but who can be made to adapt themselves to changed circumstances by education and propaganda. There are still others where no competition from factory goods need be feared and which may be put on a very sound footing if only the workers

thereof would use superior raw materials and better tools.

Some Inherent Advantages of Cottage Industry Products

The fact is that handicrafts and cottage industry products generally have certain inherent advantages over large-scale factory goods. The goods turned out by artisans and craftsmen are generally of such a character that they allow no scope for the employment of automatic machinery or for large-scale production. Secondly, popular taste often requires too great a variety for the goods to be profitably manufactured on a large scale in the power-driven and highly efficient factories of to-day. Thirdly, proximity of the market and an intimate knowledge of the consumers' wants may easily turn the scale in favour of cottage workers. Finally, the very fact that modern industry has made only a moderate advance in this country makes it possible for cottage workers to satisfy the requirements and idiosyncracies of a large section of the population. These being some very real advantages, where a cottage industry possesses elements of inherent vitality, its survival should be assisted by all possible means. "The cottage industry secures a happier existence for the

craftsman who works under comparatively healthy conditions in his own home in the midst of his family. Understanding as he does the whole series of connexions between the working and the using of the articles he produces, he can take much greater interest in his work and is able to enjoy something of the pleasure of artistic creation. Also, in the cottage industry with its autonomous worker, there is no place for any antagonism between the employer and the employed, the possibility of which constitutes an ever present difficulty of modern industry."

The Problem of Finance

We may now notice briefly the more important problems that face cottage industries in this country. First and foremost comes the problem of finance. In most cases *mahajans* advance money or raw materials at some stage or other and the artisans cannot liquidate this obligation fully either on account of their poor earnings or on account of excessive interest rates. Thus debts are piled on debts and, eventually, artisans become mere serfs working according to the dictates of *mahajans* and receiving only a meagre pittance for their labour. Moreover, these *mahajans* mostly deal in other goods and commodities of daily use and workers

are encouraged, nay compelled, to buy goods from their shops on credit. The result is that they have to pay higher prices and can never pay them fully. And thus obligations go on multiplying. *

This chronic indebtedness of cottage industry workers and their difficulty in getting loans on fair terms must be squarely faced. It will be for the industrial planner to decide whether an extension of the Agricultural Debtors' Act which is in operation in most of the provinces in India would provide the best solution, or whether relief should be sought through the agency of special co-operative credit societies. One thing, however, is clear. Mere liquidation of existing indebtedness will be no solution of the problem. Machinery must be set up whereby cottage industry workers may get loans on reasonable and fairly easy terms. The operation of the State Aid to Industries Act has been far too rigid in most of the provinces and that Act alone would not satisfy the financial requirements of cottage industries. Additional facilities must be provided and it should be possible for artisans and workers to borrow on the security of their equipment and finished products.

** Report on the Survey of the Brass and Bell-Metal Industries in Bengal (Calcutta, 1939).*

The Problem of Marketing

The other important difficulty under which cottage industry workers labour is in regard to the marketing of their finished products, the market being generally limited to their immediate neighbourhood. It is often stated that an internal market exists for artistic as well as non-artistic goods produced in cottage establishments, but there is no arrangement whereby these petty manufacturers can be brought in touch with this market. Cottage workers are often at a considerable disadvantage in not having an adequate knowledge of market conditions or of facilities for the proper distribution of their products. In many cases they go on making the same product in the same way as their ancestors have done and they consider it a nuisance to have to change their designs and patterns or to execute orders in consonance with the needs of modern fashion and dictates of modern taste. The middlemen through whom products are disposed of often have little experience of any but purely local markets and have themselves to do business through other distributing agents. *

* *Annual Report of the Department of Industries, Madras, for the year 1940-41 (Madras, 1943).*

One way in which the problem of marketing can be tackled is by the establishment of an emporium for products of cottage industries in the more important cities of a province. In this emporium products of local industries may be stocked, displayed and sold. Such an emporium would bring manufacturers in touch with merchants and consumers and establish that much needed liaison which is now singularly absent. The Government Emporium in the Central Museum, Nagpur, and the Bengal Industrial Museum, Calcutta, have filled in this gap to a remarkable extent.

Emporiums or industrial museums by themselves would not, however, solve the problem of marketing. Local exhibitions of cottage industry products also help and so also do publicity arrangements, but the crux of the problem lies in the small manufacturers' inability to get in touch with consumers direct or at least through a distributing agency which would offer reasonable terms. At present *mahajan*-financiers do most of the marketing, either by themselves or through friends, and having already put cottage industry workers under various obligations, they naturally see to it that the latter do not receive a fair price for their products. Any scheme of industrial planning must suggest ways and means

of breaking this vicious circle and of bringing manufacturers in closer touch with the market.

The Problem of Productive Technique

Thirdly, there is the problem of productive technique. In most cottage industries there is room for the improvement of productive methods. Improvements are called for in many directions—by the adoption of labour-saving devices, by the economisation of raw materials in manufacture and by the introduction of new designs and patterns so that new demands may be created and competition of goods from other sources minimised. This is largely a work of research and experiment and many provinces have been doing valuable work in this direction for the last twenty years or so. What is necessary now is that the results of these researches and experiments should be made readily available to cottage industrialists. These researches and experiments should also be practical than academic and should be conducted mainly with the object of improving the productive capacity of an industry. That a lot can be done in this direction would become obvious if a survey is made of existing industries.

Cottage Industries and Industrial and Technical Education

Finally, we may refer to the importance of industrial and technical education in any scheme of resuscitating cottage industries. The very conservatism and inertia of cottage workers demand that they should have some acquaintanceship with modern methods of production and should know how to adapt themselves to changed circumstances. "If conservatism and suspicion have to be removed, an intensive programme of industrial education has to be taken in hand."* Industrial education can, however, become more a hindrance than a help if it be not adjusted to local needs—if the general poverty of cottage workers and their inability to make far-reaching and initially costly changes in the technique of production be not kept in view. A really sound scheme of industrial education for cottage workers is a supreme necessity in India to-day.

Organisation of Cottage Industries in Japan and China

In conclusion, a reference may be made to the excellent manner in which cottage industries

* *Annual Administration Report of the Department of Industries, Bengal, for the year 1940-41* (Calcutta, 1943).

are organised in Japan and China, the homes of small manufacturers. "Primarily the small Japanese manufacturer has always catered for the domestic market and the evolution which his business has now undergone in many directions has been forced upon him by a change in the character of local demand occasioned by the increasing diffusion of Western tastes and ideas throughout the country. A contributory factor has been the spread of electricity, which has enabled the small manufacturer, despite his lack of capital, to show a high degree of adaptability in the face of changing conditions while retaining the family organisation traditional to small-scale Japanese enterprise. The output of workshops formerly engaged in the manufacture of highly specialised goods for domestic consumption, such as lanterns, umbrellas, sandals and so forth, now includes electric bulbs, bicycle parts, fountain pens, rubber shoes and many other articles. Such articles are not necessarily destined only for home consumption. Unlike the specifically Japanese goods which they tend to supersede, they are essentially suitable for export to other countries and this has incidentally opened up before the small producer entirely new areas of potential demand." The State has also come in and progress has already been made towards linking

up the scattered forces of family industry by means of price agreements and centralised selling agencies. There is also increased co-ordination with existing branches of factory enterprise, a conspicuous example being the bicycle industry, in which components are manufactured in small workshops on a contract basis and subsequently sent to the larger factories for assembly. *

In war-time China, on the other hand, quite a sensation has been caused by the success of their Industrial Co-operatives (or “Induseoes” as they are called in brief). These small societies have been turning out both munitions of war as well as goods for civilian use in ever-increasing quantities and have almost revolutionised Chinese village life. “These Chinese Industrial Co-operatives combine large-scale organisation with small-scale workshops. They are not merely a war-time organisation : they have the strength which would enable them to transform China into a more fully mechanised State after the war.” †

The examples of Japan and China have an important lesson for India : it should not be difficult for industrial planners in this country to

* G. E. Hubbard : *Eastern Industrialisation and its Effect on the West* (London, 1935).

† Nym Wales : *China Builds for Democracy* (Allahabad, 1942).

evolve a scheme more or less on these lines with necessary modifications to suit local conditions.

CHAPTER XV

UNEMPLOYMENT AND INDUSTRIAL PLANNING

Acuteness of the Problem of Unemployment

A point which is often inadequately stressed is the help that industrial development will eventually render in solving the problem of unemployment among the educated middle classes in India. Education in India has made considerable progress during the last quarter of a century, but this progress has had many undesirable features. The number of universities and scholars has increased by nearly 250 per cent. and 600 per cent. respectively during the past twenty-five years and in each of the provinces of Bengal, Bombay, Madras, U. P. and the Punjab, a much larger percentage of the population is receiving university education than in England, and because this education here is hopelessly inefficient and cheap, young men get their degrees and diplomas rather too easily. After completing their college or university education, however, they find that few jobs are available and so,

remaining unemployed, they swell the rank of a large body of idle or semi-idle intelligentsia who have become unsuccessful in carving out a suitable career for themselves.

Industrial Development and Opportunities of Employment

While the problem is mainly one of education,* it cannot be denied that the traditional avenues of employment have been far too limited to absorb a sufficiently large number of these

* For a scathing, but unhappily too true, appraisal of the present situation, the reader is referred to H. R. Soni: *Indian Industry and Its Problems, Vol. I* (Calcutta, 1936). Says Dr. Soni: "When higher education is deplorably inefficient and cheap, it cannot fail to attract a large number of scholars who are too incompetent to benefit from a higher standard of instruction, or too poor to make their due contribution towards the maintenance of that standard. And that is precisely what has happened in India, with the result that universities are turning out graduates of all descriptions on mass production lines. With no avenues of employment, there has naturally been a slump in the market, and the value of a graduate's degree has rapidly declined in recent years But in spite of this, the graduate-making process is proceeding more merrily than ever. New colleges and universities are springing up like mushrooms all over the country with the object, it seems, of rescuing the cast-off human material from the waste-paper baskets of the older institutions. The claim that they are designed to bring enlightenment to the benighted millions of India and that their founders are heroes and patriots, who exist only to serve the goddess of learning and their country, is a fraud and an imposture If the problem of middle class unemployment is at all to be solved, Government will have to make a beginning towards that end by re-shaping its whole educational policy and by preventing the entire breed of adventurers and fame and power seekers from exploiting the gullibility and weakness of the people and from deliberately misguiding public opinion for their own selfish ends."

unemployed young men. In every country diverse opportunities of employment crop up when industrial development is stimulated, and there is no reason why the same shall not be the case in India as well.

How Industrial Development May Help a Partial Solution of Unemployment

Further industrial development would help a partial solution of the problem of unemployment in three ways. Firstly, the starting of new industries would stimulate a demand for educated men possessing technical and professional qualifications. As a matter of fact, the point was stressed by a number of scientists and educationists before the U. P. Unemployment Enquiry Committee in 1935 that the development of 100 sugar factories in that province alone had given employment to 500 chemists, an equal number of engineers, a hundred other experts a thousand clerks and storekeepers, besides about half a lakh of skilled workmen and unskilled labourers. It may, therefore, be reasonably hoped that further industrialisation along sound lines will solve the unemployment problem of a very large number of educated young men in this country.*

* *Report of the Unemployment Enquiry Committee, United Provinces* (Allahabad, 1936). It would be a mistake, however, to suppose that

The second manner in which industrial development is likely to help educated but unemployed young men is by giving them facilities for running such cottage and small industries as do not require much capital. In Bengal, for instance, the Unemployment Relief Scheme of the Department of Industries has provided industrial and technical training to unemployed young men in such trades as umbrella-making, cutlery manufacture, shoe-making etc. and, after they have received their training, young men are encouraged and even helped to start small independent establishments of their own. In the preceding chapter we have noticed how cottage industries are linked with large-scale factory concerns in Japan. If cottage industries are organised in India in this Japanese fashion and the problems of marketing and finance successfully tackled, quite a decent proportion of the unemployed young men of this country may

large-scale industrialisation *alone* will solve the problem of middle class unemployment. As has been pointed out, even the maximum amount of industrialisation cannot of itself solve this unemployment problem although it would help to relieve the economic distress of the rural folk by enlarging opportunities of employment as also by stimulating demands for industrial raw materials. "The number of people actually employed in the various organised industries in India to-day is a little over 18 lakhs, which means that if it were possible to double existing factories and large scale establishments, we would hardly employ more than 36 lakhs of our countrymen out of a total number nearing 39 crores, of whom several crores must be under-employed or unemployed.

make a living by working as cottage manufacturers.

The third manner in which further industrial development will help unemployed young men is by opening up opportunities of employment as traders and middlemen. Any outburst of industrial activity is bound to create a demand for an additional number of traders and middle-men dealing both in raw materials and finished products, and quite a few unemployed young men may easily be absorbed in these channels. It may, however, be stressed here that in order that industrial expansion may be of some practical help to unemployed young men, they must acquire a new outlook on life and be prepared to work with their hands : jobs as clerks or storekeepers are extremely limited in industrial units (mills and factories) and the largest scope of employment lies in the sphere of workmen, operatives, supervisors and technical experts.

CHAPTER XVI

TECHNICAL AND COMMERCIAL EDUCATION

Reasons Why Sound Technical and Commercial Education is Necessary

The importance of the subject of technical and commercial education in any scheme of industrial planning can be hardly over-emphasised. A sound system of technical and commercial education is necessary for three main reasons. Firstly, the technique of mechanised as well as cottage production involves a certain amount of skill and dexterity which can only be acquired by going through a systematic process of training. A batch of unskilled workmen cannot do the work of production and supervision as efficiently as a batch of workmen who have received a good industrial and technical education. The proper training and supply of the human material are as necessary as a steady supply of raw materials and other factors of production. Secondly, it is only by undergoing regular industrial and technical training that middle class young men can secure employment in mills, factories, mines and plantations or set up their own industrial business. Thirdly, for the proper development of industries, it is desirable that India should, as

far as possible, be able to supply her own trained men to take charge of industrial work in various capacities rather than import experts from abroad and at a considerably high price.

Defects of the Present System of Technical and Commercial Education

It may be admitted at the very outset that the system of industrial and technical education has not yet been properly organised in India. Although well-intentioned but sporadic efforts have been made from time to time to adapt technical and commercial education to the needs of industry and commerce, the three objectives enumerated above have rarely been kept in view and a comprehensive plan drawn up accordingly. The Indian Industrial Commission which reported in the year 1918 of course decided certain questions of essential principles and urged the necessity of providing facilities for different standards of technical training for different types of industrial workers ranging from the common artisan to the highest mechanical or electrical engineer and technological expert,* but the recommendations of the Commission have been differently interpreted by the various provinces and, as a result,

* For details, see *Report of the Indian Industrial Commission, 1916-18* (New Delhi, 1918).

we now have in almost every province a number of institutions professing to impart sound and practical industrial and technical training, but without any unity of purpose and also without proper co-ordination amongst themselves. " In addition, a number of provinces have had their own " schemes ", evolved, it appears, not with a view to translating the three main objectives of technical and commercial education into reality, but to meet certain immediate special requirements. With the passage of years, each province has been inclined to attach a kind of sanctity to its own schemes and not infrequently the stubbornness of the Department of Industries in a province has stood in the way of a thorough overhaul of the existing system.

An Evaluation from a Practical Point of View

The utility of any system of education should be judged by results obtained. Measured by this standard, we may frankly admit that success has not been achieved in the matter of imparting industrial and technical education in this country. If we make a study of the employees engaged in various industries, we find that very few of them possess that thorough training which may reasonably be expected of them. Although in every province there are a

number of technical and industrial institutions seeking to impart specialised training in different branches of industrial activity, there is a singular absence of co-operation between these institutions and industrialists, with the result that while these institutions go on imparting training according to their own pet ideas, industrialists and businessmen complain that persons who pass out of these institutions are practically useless as far as industry is concerned. Of course there are a few exceptions, but generally speaking it may be safely said that in India industrial and technical education has been considered a matter for the school alone : teachers and instructors possessing neither knowledge nor experience of the aims and needs of industry have usually been appointed to serve in technical and industrial institutions and no effective steps have been taken either to enlist the interest and co-operation of industrialists and businessmen or to ensure that the instruction given in vocational schools is appropriate and sufficient.*

The same remarks apply, although to a lesser degree, to the training that is given to cottage industry workers. In almost all the provinces, there are a number of technical and/or industrial

* A. Abbott and S. H. Wood : *Report on Vocational Education in India* (New Delhi, 1937).

schools with courses of instruction on carpentry, weaving, cutlery manufacture and a number of similar subjects and every year quite a few crores of rupees are spent on such institutions. But it so happens that rural artisans and cottage industry workers who primarily are to benefit from the instruction given in these schools rarely come to them. Although baits are thrown in the form of stipends, scholarships and free tuition and very low educational qualifications are prescribed for intending entrants, artisans rarely go to these schools (but they sometimes send their children), presumably because they do not find the training imparted to be of sufficient practical value.

Technical and Commercial Education and Employment

As regards the ability of existing industrial and technical institutions to give a thorough training to middle class young men and make them fit for employment in mills, factories, mines and plantations, it may be said that they have proved remarkably unsuccessful. Although passed students and apprentices of a few institutions find no difficulty in getting the necessary employment, in most of the institutions we find a repetition of the same process that may be witnessed in non-vocational institutions—the various high

schools, colleges and universities. We see the strange spectacle of weaving institutes turning out weavers, tanning institutes turning out tanners, sugar institutes turning out panmen in large numbers every year, but hardly twenty-five per cent. of them getting jobs in cotton and jute mills, leather workshops or sugar factories, although these mills, workshops and factories employ hundreds and thousands of illiterate and untrained workers every year. It may be argued that mill and factory managers have got a bias against persons who pass out of existing industrial and technical institutions, but may it not be pertinently asked why they should have this bias? Mill and factory managers are interested chiefly in the efficiency of their workers and if persons who have passed out of existing industrial and technical institutions are really more efficient than illiterate and untrained workers, managers should feel tempted to employ the former in preference to the latter. Actually, the reverse is the case. Can an impartial observer help concluding that something must be very wrong with the instruction that is imparted in our technical and industrial institutions?

Technical and Commercial Education and Independent Business

In the matter of encouraging young men to set up their own independent business also, our existing industrial and technical institutions have fared no better. Many of them profess to teach young men the entire manufacturing and productive technique of some cottage and small-scale industries, and every year a large number of persons receive this training more or less at the expense of the State, but later on very few of them are seen to have set up independent businesses of their own. It is not the absence of capital that stands in their way, because some of these businesses do not require much capital and in others where some decent capital may be needed many of these young men are quite prepared to provide it ; the difficulty lies in the fact that the courses of instruction that have been imparted have not been of a *practical* character nor have they been scientifically devised to enable students to set up their own independent business on a competitive basis. A survey of small businesses in every province reveals that most of them are still in the hands of illiterate and untrained craftsmen and that persons trained in industrial and technical institutions cut a very sorry figure when pitted against their untrained worker-competitors.

Technical and Commercial Education Tackled so far in a Blind Fashion

The conclusion is, therefore, inescapable that the problem of technical and commercial education also has so far been tackled in the same blind fashion as general education. Just as the State and the public have gone on with their merry game of establishing more high schools, colleges and universities with the alleged objective of removing illiteracy and bringing the light of education within the easy reach of every household, so also they have gone on establishing new industrial and technical schools and expanding existing ones with the alleged objective of making the community industrially and commercially minded. The provinces have more or less vied with one another in this exciting game and the need for *sound* technical and commercial education in an industrially backward country like India has been conveniently overlooked.

A Thorough Overhaul is Necessary

The need of the hour is, therefore, for a thorough overhaul of the existing system. To do this, the active support of industrialists and businessmen is essential. No false sense of prestige should prevent the State and the public from admitting that so long they have travelled in a

wrong direction and that they mean to retrace their steps now. The actual organisation of industrial and technical education will always have to be left in the hands of experts, but let not these experts be fanatics : let them take a broad view of things ; let them measure any scheme of industrial and technical education against the extent to which the products of that education get a rightful place in life. We have had enough of education for its own sake ; let us have a little bit of education for the sake of those who receive it.

In what precise manner the present system of our industrial and technical education should be overhauled and re-organised is a matter of detail, but certain fundamental points may be remembered. This education must be *intensely practical*, i.e., it must be such as to enable trained persons to get readily absorbed in industry and trade. It must also help to increase their industrial efficiency and enable such of them as receive cottage industry training to set up independent business. Institutions that are established under this re-organisation scheme should have expert instructors who know not merely technique, but are conversant with manufacturing and marketing conditions as well. And, finally, in order that the essential unity in the purpose of

general and vocational education (viz., to develop an immature child into a good citizen) may be maintained, each subject in the vocational school should have its origin in the non-vocational school : it should, in fact, be nothing more than an extension of it. *

CHAPTER XVII

CONCLUSION

Industrial Planning—An Attack on Many Fronts

We have come to the end of our analysis. We have seen that industrial planning is a complex affair involving simultaneous and comprehensive attack on many fronts and in this attack no front can be ignored or its importance belittled. Of course in the actual translation of plans into concrete shape certain things will have to come first and others afterwards, but the planner must not forget that for the building up of an efficient and durable system every little problem will eventually have to be tackled. And this is by no means an easy task.

* *Vide* the chapter on "Technical, Commercial and Art Education" in the Report by the Central Advisory Board of Education : *Post-War Educational Development in India* (New Delhi, 1944).

A Magic Word

In this connexion we may utter a note of warning. The very phrase "industrial planning" is apt to make the ordinary man see visions of a great future and hope that once a Commission or a Committee has suggested a plan, everything will follow smoothly and automatically. Such a hope is, however, an illusion which needs to be dispelled. Planning is a magic word—who would not plan?—but it may easily degenerate into a fetish.

A considerable amount of confusion prevails as to the meaning of industrial planning. Without going into controversial details, it would be safest to accept the definition of the authors of the Bombay Plan, viz., that the ultimate objective of industrial planning is to increase the volume of India's industrial production to the fullest extent which its natural resources would allow. This being the objective, the technique would be so to harness the various factors that the maximum and best results are obtained. This may involve the changing of fundamental pre-requisites, e.g., the conditions of the environment within which people live and work; it may also involve planned re-distribution of industry and re-organisation of agriculture. Planning thus implies "the intelligent use by a community of

its environment for the common good of its neighbours, its successors and itself". *

This does not mean that planning is a mere study of technological possibilities. Industrial planning, if it is to be effective, must involve a preliminary decision as to the rate of development contemplated. It must also involve a mapping out of the structures of consumers' and producers' demand for various goods and services at successive stages of development and the determination of the order of priorities thereof. And, finally, industrial planning must envisage the setting up of the producing and distributing machinery required to bring about the desired rate of development and also to make the necessary allocation of investible resources as between consumers' goods and producers' goods industries. †

A Few Words of Caution

A few words of caution are also necessary for those who think that industrial planning would mean prosperity for everybody and no economic loss to any section of society. If we accept the thesis that the main purpose of industrial policy

* E. A. Gutkind: *Principles of National Planning* (London, 1943).

† F. Zweig: *The Planning of Free Societies* (London, 1942).

is to promote economic efficiency, i.e., to increase income, output or satisfaction at the least cost, monetary, physical or real, we are confronted with the question as to how far an industrial plan would further this economic efficiency. The main categories of industrial policy consist in problems of industrial structure, of industrial functioning and administration, and of industrial or economic technique such as price-fixing or output restriction, and, in executing any of these policies, consumers as a class are bound to suffer, at least in the immediate future. * In pre-war U. S. A., the national recovery plans of President Roosevelt had their negative features : the National Recovery Act raised costs and fostered monopoly ; the Agricultural Adjustment Act restricted output and subsidised immobility ; the Gold Policy attempted to raise prices by a method which increased the scarcity of gold and imposed the maximum inconvenience on the world at large. Similarly, in the U.S.S.R., all the three Five Year Plans imposed tremendous hardship on the entire population. In India, too, we should be prepared for similar hardships which planning and restrictionism must entail. †

* Cf. P. Sargent Florence's article on "Economic Research and Industrial Policy" in the *Economic Journal* (London) for December, 1937.

† *Economic Journal* (London), December, 1934.

We should not also overlook the fact that a planned economy of any sort has to be planned from the centre and that the few persons there may well make mistakes. No doubt there are dangers in giving plenary powers to a small group of persons, but these dangers must be faced. Until and unless the responsibility for direction and execution is specifically vested in a small body of experts, planning would never become effective.

Another point to be remembered is that although planning is usually carried on in relation to a specific task, for a definite time, and in a limited territory, changes coming from without these limits may upset the best laid programmes. Thus "the chemical inventions making substitutes of wool and cotton from cellulose, gasoline from coal, and rubber from coal and chalk, may affect cotton, coal and timber production, and no doubt policies in regard to other natural resources." So closely interrelated is the mechanism of modern civilisation that a change occurring in one part, say in industry, will produce changes in a quite different and unexpected part, as for instance, in the schools, or in the use of natural resources. Hence the planner must always have before him a view of the general causes, types, and trends *over a broad front*: his vision should not be obstructed by narrow issues nor should he grieve over much

if, in the process of executing his plan, he is driven to the necessity of having to accept modifications or changes.

Plans Should Be Practical and Workable

Finally, plans should be both practical and workable. In recent years the craze for planning has reached such fantastic limits that we now have far too many verbose documents on economic and industrial planning, very few of which provide a clear, unequivocal and a relatively well-defined basis of discussion. Let us hope that our industrial planners will guard against this tendency of becoming loquaciously vague about plans. Let the "plans" which will be put forward by them have the virtue of rational cohesion and clear thinking: let their "plans" have less of terminological or phraseological ornaments—let there be no atmosphere of lyrical unreality about what they recommend. A practical and workable plan is all that is needed and it does not matter very much whether it is the realisation of a pre-conceived idea, or a more or less incidental afterthought. For, carefully worked out, planned economy can, through its greater power to vary the income of the community, through its ability to further economic efficiency, and in general through the superiority of consci-

ous reason over blind instinct in the achievement of any end whatsoever, be made into a far better economy than a *laissez faire* economy can ever hope to be. As has been well stressed by Ferdynand Zweig, the real issue is not "To plan or not to plan?" but what kind of planning is needed—what its objectives should be, how far it should go, and in what spirit it ought to be carried out.

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